STEPTOE & JOHNSON LLP
ATTORNEYS AT LAW

228291

Samuel M Sipe Jr.
202 429.6486
ssipe@steptoe.com

1330 Connecticut Avenue, NW
Washington, DC 20036-1795
Tel 202.429 3000
Fax 202 429 3902
steptoe.com

November 22, 2010

VIA HAND DELIVERY

ENTERED
Office of Proceedings
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Public Record

Ms. Cynthia Brown
Chief, Section of Administration
Office of Proceedings
Surface Transportation Board
395 E Street, SW
Washington, DC 20423-0001

Re: ***Western Fuels Ass'n, Inc. & Basin Elec. Power Coop. v. BNSF Railway Company*, STB Docket No. 42088**

Dear Ms. Brown:

Enclosed are the original and ten copies of the public version of the Comments of BNSF Railway Company on Remand. The Highly Confidential version is being filed under separate cover. We have included one unbound copy of the public version of the Comments of BNSF Railway Company on Remand to be uploaded onto the Board's webpage. Also enclosed is a CD containing a PDF version of this filing. Please note that the filing contains color images throughout.

Please address any questions concerning this filing to the undersigned.

Sincerely,

Samuel M. Sipe, Jr.
Counsel for BNSF Railway Company

Enclosures

cc: Parties of Record (with enclosures)

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PUBLIC VERSION

NOV 22 2010

BEFORE THE
SURFACE TRANSPORTATION BOARD

WESTERN FUELS ASSOCIATION, INC., and BASIN ELECTRIC POWER COOPERATIVE	
Complainants,	**Docket No. 42088**
v.	ENTERED Office of Proceedings NOV 22 2010 Part of Public Record
BNSF RAILWAY COMPANY	
Defendant.	

COMMENTS OF BNSF RAILWAY COMPANY ON REMAND

BNSF Railway Company ("BNSF") hereby submits its comments regarding the action the Board should take on remand of the Board's decision in *Western Fuels Association, Inc. v. BNSF Railway Co.*, STB Docket No. 42088 (STB served Feb. 18, 2009) ("*February 2009 Decision*") from the United States Court of Appeals for the District of Columbia Circuit ("D.C. Circuit") in *BNSF Railway Co. v. Surface Transportation Board*, 604 F.3d 602 (D.C. Cir. 2010), *rehearing and rehearing en banc denied*, No. 09-1092 (Sept. 2, 2010).

I. INTRODUCTION

On February 18, 2009, the Board issued a decision in this rate reasonableness case that resulted in the largest rate reduction and reparations award in the Board's history.[1] The magnitude of the rate reduction was driven in large part by the Board's use of a revenue allocation methodology for cross-over traffic that departed fundamentally from the methodology

[1] The Board issued technical corrections to the *February 2009 Decision* on June 5, 2009 and resolved a compliance dispute between BNSF and complainants relating to the *February 2009 Decision* on July 27, 2009.

adopted by the Board in *Major Issues in Rail Rate Cases*, STB Ex Parte No. 657 (Sub-No.1)(STB served Oct. 30 2006)("*Major Issues*"). BNSF appealed the Board's *February 2009 Decision* to the D.C. Circuit. On May 11, 2010, the D.C. Circuit remanded the *February 2009 Decision* to the Board to consider BNSF's claim that the modified Average Total Cost ("ATC") methodology applied by the Board in the *February 2009 Decision* introduces an improper bias into the stand-alone cost ("SAC") analysis against the carrier because it double-counts variable costs in the revenue allocation formula. *BNSF Railway Co.*, 604 F.3d at 612-13.

For the reasons discussed below, the Board should find on remand both that the modified ATC methodology is biased because it double-counts variable costs and that the ATC methodology originally adopted in *Major Issues* is the proper methodology for allocating revenues on cross-over traffic in this case and other full SAC cases. The Board should recalculate the results of the SAC analysis using original ATC. Original ATC was designed to ensure that SAC analyses using cross-over traffic are not biased in favor of complainants who rely on cross-over traffic moving over short, high-density stand alone railroads ("SARRs"). Original ATC eliminates the bias from cross-over traffic by allocating through revenue based on the relative total costs of the defendant railroad over the two segments of a cross-over movement. In assessing relative total costs, original ATC accurately reflects economies of density, which is a defining characteristic of the railroad industry cost structure.

As demonstrated below and in the verified statement of Michael R. Baranowski and Benton V. Fisher, modified ATC is biased because it double counts variable costs in allocating revenues on cross-over traffic and thereby fails to appropriately consider economies of density, which are reflected only in fixed costs. As a result, a complainant using cross-over traffic on high-density portions of a railroad's network will consistently obtain SAC results under modified

ATC that are more favorable than if cross-over traffic had not been used on the SARR, thus defeating the Board's objective in adopting original ATC to keep the SAC results from being distorted by the use of cross-over traffic on a SARR.

The Board created modified ATC because of its concern that original ATC allocated revenues on some low-rated movements that were below the incumbent's URCS variable costs for the on-SARR portion of the movement. The Board's conclusion that the revenue shortfall on these movements was evidence of an impermissible cross-subsidy is incorrect and, as explained below, is inconsistent with Board precedent. Moreover, in attempting to address a small revenue shortfall on three low-rated movements on the SARR (less than $600,000 for 2005), the Board's modified ATC methodology transferred a much larger sum (over $2.7 million on those three movements and over $12 million for all cross-over movements in 2005) from the low-density residual incumbent to the high-density SARR. This massive revenue transfer went far beyond what was necessary to correct the perceived problem of below-cost revenues on a few movements, more than doubling the reparations that BNSF would have been required to pay under original ATC.

Across the board application of modified ATC is a biased, arbitrary and highly unfair solution to the problem that led the Board to modify ATC in the first place. In fact, the Board's concerns about the allocation of revenue under ATC on low-rated traffic are not warranted and do not justify departing from the original methodology. But even if the Board's concerns about the allocation of revenues under ATC on low-rated traffic were valid, the Board should address those concerns with a solution tailored to the scope of the problem, and thereby avoid introducing unnecessary bias into the analysis.

II. BACKGROUND

The Board created and adopted the ATC revenue allocation methodology in *Major Issues*. a rulemaking proceeding on important issues of SAC methodology that involved broad participation by railroads and shippers. The Board described its *Major Issues* rulemaking as a "critical step" in its initiative to "reform the entire rate process." *Major Issues*, slip op. at 3. Comments on the Board's *Major Issues* proposals, including the newly created ATC methodology, were received from over twenty parties, including the United States Department of Transportation.

In explaining the rationale underlying original ATC, the Board summarized the history of cross-over traffic as used in SAC cases. As the Board explained, cross-over traffic refers to non-issue traffic that is included in the SAC analysis for only part of the through movement that occurs on the defendant in the real world. The complainant assumes that the SARR will handle the cross-over movement for part of the through movement – usually on a high-density segment of the defendant's rail network – and interchange the traffic with the residual portion of the defendant's railroad network for the remaining portion of the through movement. The Board acknowledged that "the concept of cross-over traffic was not contemplated by the ICC when it adopted *Guidelines*." *Major Issues*, slip op. at 31. Nevertheless, beginning with *Bituminous Coal – Hiawatha, UT to Moapa, NV*, 10 I.C.C. 2d. 259 (1994), the Board recognized that the use of cross-over traffic could simplify SAC cases by allowing a complainant to model only a portion of the incumbent's railroad network used to provide transportation to the SARR traffic group. The Board explained that "[i]n allowing the use of cross-over traffic, we seek to make the analysis more manageable without introducing bias." *Major Issues*, slip op. at 24.

Since railroads charge through rates for through service and do not charge rates for portions of a single-line through movement, the central issue raised by the use of cross-over

traffic in the SAC analysis has been to determine how the through revenue of the movement should be split between the on-SARR and off-SARR segments of the movement. In *Duke Energy Corp. v. Norfolk S. Ry.*, STB Docket No. 42069 (STB served Nov. 6, 2003), the Board concluded that the revenue allocation approach should focus on the relative average costs that the defendant railroad incurs over the relevant segments of the through movement. As the Board explained in *Major Issues*, "[b]y focusing on the ratio of actual costs incurred by the carrier, the revenue allocation method should maintain, to the extent possible, the relationship between revenues and costs that would exist in a full SAC analysis." *Major Issues*, slip op. at 25.

Before *Major Issues*, the Board used a mileage-based approach to allocate through revenue between the on-SARR and off-SARR portions of a through movement. However, the Board acknowledged that such an approach "allocates revenue according to a crude estimate of the relative variable costs of hauling the traffic over the relevant segments, rather than the total costs. The approach therefore fails to take into account the defining characteristic of the railroad industry – economies of scale, scope and density." *Id.* As the Board explained, "[e]conomies of density reflect how average total costs for a network of a given size initially decrease with increases in output." *Id.* at 34.

For regulatory purposes, a railroad's costs are classified as costs that vary with changes in traffic levels (variable costs) and costs that do not vary with changes in traffic levels (fixed costs). Variable costs are incurred only as a result of a given traffic movement, and they do not vary for a particular movement based on the level of traffic. In other words, variable costs are independent of traffic density. Fixed costs are costs that the railroad incurs regardless of the level of traffic. Therefore, responsibility for the fixed costs of a given line segment is shared among the movements on that segment. The higher the traffic volumes, the lower the average

fixed costs for each unit of traffic on the line segment. Thus, fixed costs reflect economies of density while variable costs do not.

Complainants are more likely to prevail in SAC cases where they posit high-density SARRs with a relatively high number of movements available to share fixed costs. As a result, complainants have an incentive to use cross-over traffic to increase the density of their SARRs. A mileage-based revenue allocation methodology such as MSP (Modified Straight-Mileage Prorate) that is a proxy for relative on-SARR and off-SARR variable costs allocates too much revenue to the SARR because it fails to account for the fact that there are more movements on the high-density SARR segment to share fixed costs than on the off-SARR segment. Since variable costs do not reflect economies of density, variable cost-based revenue allocation approaches fail to reflect the impact of economies of density on the relative on-SARR and off-SARR costs. The high-density SARR therefore receives a disproportionate amount of the revenue on the through movement under revenue allocation methodologies that over-emphasize variable costs.

Recognizing the bias produced by a revenue allocation approach like MSP, BNSF proposed that the Board adopt a different methodology, "Density Adjusted Revenue Allocation" ("DARA"), in *Public Service Co. v. Burlington Northern and Santa Fe Railway Co.*, STB Docket No. 42057 ("*Xcel*"). BNSF argued that DARA would more appropriately reflect the impact of traffic density on total costs and would properly allocate more revenues to higher-cost, low-density lines. While acknowledging the defects in MSP, the Board rejected DARA on the

basis that it did not properly reflect the phenomenon that economies of density can be expected to diminish and ultimately to be exhausted at increasingly high levels of output.[2]

BNSF appealed the Board's *Xcel* decisions to permit use of cross-over traffic and to reject DARA, but the D.C. Circuit affirmed those Board rulings. The court acknowledged that it was appropriate for the Board to permit the use of cross-over traffic as a simplifying mechanism based on a balancing of "the need for a reasonably accurate methodology and the need to avoid unduly protracting already complex and expensive SAC proceedings." *BNSF Railway Co. v. S.T.B.*, 453 F.3d 473. 482 (D.C. Cir. 2006) ("*Xcel Appeal*"). The Court cautioned, however, that its view might have been different if there had been evidence "that the imprecision implicit in the use of cross-over traffic tends to overestimate the revenues generated by a SARR to a degree that outweighs any efficiency gains." *Id.* at 483. The Court also acknowledged BNSF's concerns that an accurate cost-based revenue allocation methodology needed to account for economies of density on high-density SARR lines. As the Court stated: "Were the Board presented with a model that took account both of the economies of density and of the diminishing returns thereto, a decision to adhere to its MSP model would be on shaky ground indeed." *Id.* at 484.

Responding to the Court's cautionary dicta, the Board adopted ATC in *Major Issues*. The Board explained that a successful revenue allocation methodology would be based on three premises. First, the purpose of allowing cross-over traffic in SAC analyses is "to make the analysis more manageable without introducing bias." *Major Issues*, slip op. at 24. Second, to achieve simplification without biasing the SAC results, revenue should be allocated based on the defendant carrier's relative average total costs of providing service over the on-SARR and off-SARR segments of the through movement. *Id.* at 25. Third, a cost-based revenue allocation

[2] *See, e.g., Public Service Co. v. Burlington Northern and Santa Fe Railway Co.*, STB Docket No. 42057, slip op. at 9-11 (STB served Jan. 19, 2005)

must reflect economies of density, and "any approach that seeks to account for economies of density must examine the average total costs, rather than the average variable costs." *Id.* at 34.

The Board determined that original ATC satisfied the requirements for a successful cross-over revenue allocation methodology. Under original ATC, the average variable cost per ton is calculated for the on-SARR and off-SARR segments based on the incumbent's URCS. *See Major Issues in Rail Rate Cases*, STB Ex Parte No. 657 (Sub-No. 1), slip op. at 20 (served Feb. 27, 2006). The average fixed cost per ton is calculated for each density segment by first determining the incumbent's system average fixed cost per mile, which is then converted to a per-ton measure using the route miles and traffic density for each density segment. *Id.* The average total cost of the movement on each segment is the sum of the movement's variable costs and the movement's fixed costs for the segment. Revenues are then allocated to the SARR and incumbent based on the proportion of average total costs borne by each segment. The ATC methodology is illustrated with an example at pages 2-3 of the verified statement of BNSF's expert witnesses Messrs. Baranowski and Fisher, attached to these remand comments. ("Baranowski/Fisher V.S.")

Shippers appealed the Board's decision to adopt original ATC to the D.C. Circuit. On appeal, the Board defended original ATC on the ground that it resolved the D.C. Circuit's concerns with the prior methodology because it relied "on the *average* fixed cost per ton of the various segments to provide an unbiased, cost-based revenue allocation method that will fairly account for economies of density and diminishing margins thereto."[3] The D.C. Circuit agreed with the Board that a "critical flaw" in the Board's prior revenue allocation methodologies was

[3] Joint Brief of Respondents, *BNSF Railway Co. v. Surface Transportation Board*, Docket Nos. 06-1372, 06-1373, 06-1374, 06-1398, 06-1399, 06,1401, 06-1404, 06-1409, 06-1421, at 42 (D.C. Cir.) (filed Jan. 8, 2008) ("*STB Major Issues Brief*").

the failure to "take into account 'economies of density' – the principle that the more traffic on a given stretch of rail, the lower the average cost (and hence the lower the cross-over traffic revenue that should be attributed to it)." *BNSF Railway Co. v. Surface Transportation Board*, 526 F.3d 770, 782 (D.C. Cir. 2008). Since the ATC methodology properly reflected economies of density, the Court upheld the Board's adoption of original ATC.

Thus, the Board created and adopted original ATC in response to concerns by the D.C. Circuit, vetted it in a broad rulemaking proceeding, defended it on appeal to the D.C. Circuit, and obtained approval for it from the D.C. Circuit. However, in the first SAC case to apply the rules adopted in *Major Issues*, the Board, without notice to or input from the parties, departed from original ATC and adopted what it called a modified ATC that differed markedly from the original by double counting variable costs. *See Western Fuels Association, Inc. v. BNSF Railway Co.*, STB Docket No. 42088, slip op. at 14 (STB served Sept. 10, 2007) ("*September 2007 Decision*"). The Board explained that its modified version of ATC was necessary to address instances where original ATC would not have allocated revenues to the SARR portion of a movement that were sufficient to cover the incumbent's URCS variable costs for that portion of the movement. *Id.*

The Board's modified ATC methodology was in fact a new methodology that no longer based the revenue allocation on relative average total costs of the on-SARR and off-SARR segments of a movement. Under the Board's modified ATC, "revenue assigned to the on-SARR part of a cross-over movement will equal the variable cost to haul the traffic over the facilities replicated by the SARR plus the portion of available revenue contribution allocated in accordance with ATC." *Id.* Modified ATC is a 2-step process. In the first step, revenues are assigned to the on-SARR and off-SARR segments of a through movement equal to the

incumbent's variable costs of the movement on each segment. Because variable costs do not reflect economies of density, economies of density are not taken into account at all in this first step. In step 2, any revenues that are left over after step 1 – the contribution in excess of variable costs – are allocated using the ATC original formula described above. Messrs. Baranowski and Fisher illustrate the modified ATC methodology with an example. *See* Baranowski/Fisher V.S. at 11-12.

The Board concluded in the *September 2007 Decision* that BNSF's rates did not exceed maximum reasonable rates. However, the Board also gave complainants Western Fuels Association and Basin Electric Power Cooperative ("WFA/Basin") an opportunity to file new SAC evidence. BNSF petitioned the Board to reconsider its adoption of modified ATC in the *September 2007 Decision*, as well as the decision to give WFA/Basin a second bite at the apple.[4] BNSF argued that modified ATC contradicted the Board's premise that cross-over revenues should be allocated in proportion to the share of average total costs borne by the incumbent on the on-SARR and off-SARR segments of a movement. For some lower-rated movements, the revenue allocation under modified ATC was entirely dependent on variable costs and therefore did not account for economies of density at all. For higher-rated movements, modified ATC weighted variable costs twice, thereby significantly understating the importance of fixed costs in determining average total costs and understating the effects of economies of density. BNSF also pointed out that the objective of correcting a perceived problem regarding the application of original ATC to low-rated traffic could not justify giving double weight to variable costs in allocating revenues for *all* traffic, including higher rated movements.

[4] BNSF Railway Company's Petition for Reconsideration, *Western Fuels Association, Inc. v. BNSF Railway Co.*, STB Docket No. 42088 (filed Oct. 22, 2007).

The Board rejected BNSF's petition without addressing BNSF's concerns about the double-weighting of variable costs in the allocation of cross-over revenues for higher-rated traffic.[5] The Board's subsequent decision on the merits of WFA/Basin's new SAC evidence, which applied modified ATC to a revised SARR traffic group that WFA/Basin had modified to remove nearly all of the low-rated traffic about which the Board had been concerned, resulted in the largest rate reduction and reparations order in the history of the agency. The use of modified ATC was one of the primary factors contributing to this result. BNSF appealed the decision to the D.C. Circuit, challenging, among other things, the Board's abandonment of original ATC. BNSF argued that the Board had no valid basis for adopting a revenue allocation methodology that double-counted variable costs and that this double-counting reintroduced the bias in SAC analyses in favor of the complainant shipper that ATC was intended to eliminate. The court concluded that the Board had failed to consider BNSF's double-count argument and remanded the case for further consideration of that issue.

III. ARGUMENT

A. By Double-Counting Variable Costs, Modified ATC Reintroduces The Bias In Favor Of SAC Analyses Using Cross-Over Traffic That Original ATC Was Intended To Eliminate.

The Board adopted its original formulation of ATC in *Major Issues* as a means of legitimizing the use of cross-over traffic in SAC cases. The prior revenue allocation method, MSP, produced distorted and biased results in favor of complaining shippers who posited high-density SARRs. As the Board's counsel explained on brief to the D.C. Circuit in the appeal of *Major Issues*,

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[5] *Western Fuels Association, Inc. v. BNSF Railway Co.*, STB Docket No. 42088 (STB served Feb. 28, 2008) ("*2008 Recon. Decision*").

> [a]s complainants began to exploit the cross-over traffic feature, it became clear that MSP was profoundly flawed because it provided far too much revenue to high-density corridors. It created the incentive for complainants to replicate only the high-density corridors and leave the costs associated with the off-SARR portions of the movements unaccounted for. This failing led the Board (with encouragement from this Court) to replace MSP with an approach that better reflects the nature of cross-over traffic as a simplifying device for which a cost-based method is needed.

STB Major Issues Brief, at 40. That better approach was original ATC.

The virtues of original ATC were readily apparent to the Board and the D.C. Circuit. By focusing on total costs, including the substantial element of fixed costs that do not vary with traffic levels, original ATC takes account of traffic densities and accurately reflects the relative costs of the on-SARR and off-SARR segments of a movement. Unlike the prior revenue allocation methodologies used by the Board, which focused primarily on variable costs that do not reflect economies of density, ATC accounts for the relatively higher costs that must be recovered on low-density off-SARR line segments. ATC therefore allows cross-over traffic to be used in SAC analyses to "promote[] simplification by making the SAC results relatively insensitive to the size and scope of the SARR." *STB Major Issues Brief* at 12. By allocating revenues based on the relative costs of the on-SARR and off-SARR segments of a movement, "a truncated SAC analysis using cross-over traffic will approximate the outcome of a full SAC analysis, which provides origin-to-destination service for the entire traffic group." *Major Issues*, slip op. at 24. Under original ATC, simplification can be achieved without distorting the SAC results.

The key insight of original ATC is that fixed costs must be fully accounted for in a cost-based revenue allocation mechanism in order to give effect to economies of density. As the Board has acknowledged, "the defining characteristic of the railroad industry [is] economies of scale, scope and density." *Major Issues*, slip op. at 25. Original ATC implements this key

insight by using URCS total costs – the sum of URCS fixed and URCS variable costs – in its calculations. Although the precise portions of variable and fixed costs will differ from year to year and carrier to carrier. variable costs typically represent about 75 percent of BNSF's total URCS costs and fixed costs represent about 25 percent. *See* Baranowski/Fisher V.S. at 13.

By devising a revenue allocation mechanism based on total costs that accurately reflects economies of density, the Board was able to achieve the objective of allowing cross-over traffic to be used in SAC analyses to simplify the analysis without introducing bias.[6] When shippers challenged original ATC before the D.C. Circuit, the Board explained to the Court that "[t]he first premise underlying the ATC methodology is that cross-over traffic is a simplification device that should not bias or distort the SAC results." *STB Major Issues Brief* at 11.

Modified ATC undermines the first premise underlying the original ATC methodology. It biases and distorts the SAC results in favor of complaining shippers. It does this by under-weighting the fixed cost component of average total costs, which eliminates most of the impact of economies of density from the revenue allocation calculation. As a computational matter, it is the double-counting of variable costs under the modified ATC method that leads to the under-weighting of fixed costs and the consequent distortions in revenue allocations and bias in SAC results.

1. On Remand the Board Must Acknowledge that Modified ATC Entails a Double-Count of Variable Costs.

The D.C. Circuit remanded this case to the Board for the Board to consider BNSF's claim that modified ATC is biased because it double-counts variable costs. As the first step in this

[6] As the Board explained in Major Issues, "[i]n allowing the use of cross-over traffic, we seek to make the analysis more manageable without introducing bias." *Major Issues*, slip op. at 24; *see also id.* at 32 ("the use of cross-over traffic is nothing more than a simplifying device and as such we must seek to make the analysis more manageable without introducing bias.")

process, the Board must acknowledge that modified ATC in fact entails a double-count of variable costs.

In its brief to the D.C. Circuit in this case, the Board argued that modified ATC does not "permit[] a double-recovery of variable costs" because step 1 of modified ATC allows a recovery of variable costs while step 2 "only allows recovery of contribution to fixed costs." Joint Brief of Respondents, *BNSF Railway Co. v. Surface Transportation Board*, Docket Nos. 09-1092, 09-1190, 09-1234, at 64 (D.C. Cir.) (filed Nov. 13, 2009) ("*STB Brief*"). This statement sidesteps the double-count issue because it ignores the mechanics of the calculation made in the second step of modified ATC. Step 2 of modified ATC allocates the contribution remaining after variable costs have been allocated in step 1. The contribution is allocated in accordance with original ATC. Variable costs are a significant component of original ATC, thus they are taken account of through the application of ATC in step 2 of modified ATC. Put another way, variable costs are a primary driver of the revenue allocation that occurs in step 2 of modified ATC. Thus, modified ATC most assuredly takes account of variable costs twice – once in step 1, which involves direct allocation of variable costs, and a second time in step 2, in which the variable cost component of original ATC is a principal driver of the allocation of the contribution in excess of variable costs remaining after step 1.[7]

The existence of a double-count of variable costs in modified ATC can be seen by contrasting the formula used to produce the modified ATC revenue allocation to the formula for

[7] Variable costs are not fully counted twice in modified ATC revenue allocations. That would not even be possible unless a movement exhibits an R/VC ratio of more than 200 percent. Variable costs are, however, fully accounted for in step 1 of modified ATC and are the principle driver of the allocation of contribution in step 2. This is the sense in which they are "counted" or "accounted for" twice in modified ATC. As explained below, the distortions that flow from this double counting are unmistakable.

original ATC. Under original ATC, the SARR is allocated revenue using the following formula:[8]

$$\text{SARR Revenue} = \frac{VC_{SARR} + FC_{SARR}}{ATC_{Total}} * \text{Through Revenue}$$

Under original ATC, variable costs are considered in determining the average total costs on the SARR portion of the movement, but they are only considered once. However, under modified ATC, the SARR is allocated revenues using the following formula:[9]

$$\text{SARR Revenue} = VC_{SARR} + \frac{VC_{SARR} + FC_{SARR}}{ATC_{Total}} * \text{Contribution}$$

The VC_{SARR} term clearly appears twice. The variable costs of the defendant on the SARR portion of the through movement are counted twice in the formula for allocating revenues. The effect of this double-count is to overstate the impact of variable costs in the revenue allocation process and to understate the effect of fixed costs.

The double-counting of variable costs is clear in a graphic illustration of how modified ATC allocates revenue on a cross-over movement. Baranowski/Fisher Figure 6 below, reproduced from the verified statement of Messrs. Baranowski and Fisher, shows that by counting variable costs once in step 1 of the modified ATC process and again in allocating contribution in step 2, modified ATC drastically reduces the weighting given to fixed costs and thereby diminishes the impact of economies of density which are reflected only in the fixed cost portion of the revenue allocation.

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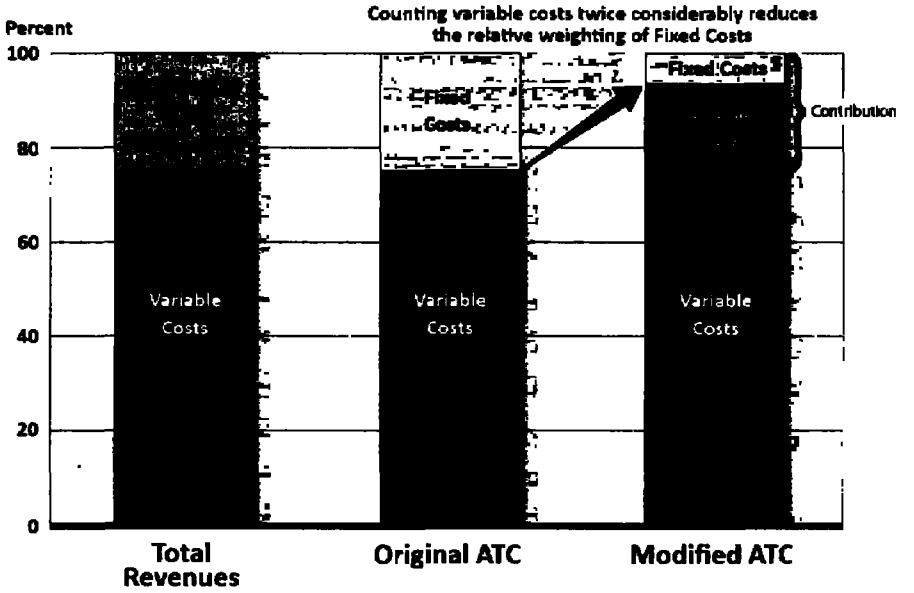
[8] In the equation, SARR Revenue refers to the amount of through revenue allocated to the SARR; VC_{SARR} is the variable cost per ton of the movement on the SARR segment; FC_{SARR} is the fixed cost per ton of the movement on the SARR segment; and ATC_{Total} is the sum of fixed and variable costs per ton for the through movement.

[9] Contribution is the revenue of the through movement in excess of total variable costs.

Baranowski/Fisher Figure 6:
STB Modified ATC Formulation Significantly Over-Weights Variable Costs



Modified ATC is a step backward to a revenue allocation methodology based primarily on variable costs.

2. The Distortion in Revenue Allocation Created by Modified ATC Is Readily Apparent.

The distortion in revenue allocation that results from use of modified ATC begins with an over-emphasis on variable costs and an under-emphasis on fixed costs. It leads to a bias in favor of high-density SARRs. As Messrs. Baranowski and Fisher explain, variable costs account for about 75 percent of URCS average total costs and fixed costs account for about 25 percent. So, for an average movement on BNSF, fixed costs would drive about 25 percent of the revenue allocation under original ATC. The 75/25 weighting of variable to fixed costs would be maintained under ATC in allocating through revenue for this average movement regardless of the absolute amount of through revenue generated by the movement. Under modified ATC,

variable costs are given too much weight. For an average movement generating revenues equal to total costs, modified ATC allocates full variable costs in step 1 and drives 75 percent of the allocation of contribution in step 2. Thus, under modified ATC, variable costs account for almost 94 percent of the revenue allocation and fixed costs account for about 6 percent of the revenue allocation. *See* Baranowski/Fisher V.S. at Figure 7. The influence of fixed costs on the revenue allocation is vastly diminished. Messrs. Baranowski and Fisher demonstrate that modified ATC dilutes the impact of economies of density on all movements, regardless of the actual split between variable and fixed costs on an individual movement or the amount of contribution on the movement. *See* Baranowski/Fisher V.S. at Tables 1 and 2.

The concomitant effect of this significant understating of fixed costs under modified ATC is to understate the role that the Board concluded that economies of density should play in revenue allocation when it adopted original ATC. Thus, in cases like this one where SARR segments exhibit higher densities than off-SARR segments, more revenues are allocated to the high-density SARR segment than is appropriate and less revenues are allocated to the lower density off-SARR segment.

Messrs. Baranowski and Fisher demonstrate with a simplified model the systematic over-allocation of revenues to the on-SARR segments of movements that have higher traffic densities than off-SARR segments. The railroad system modeled by Messrs. Baranowski and Fisher is comprised of six segments, each of which is 100 miles in length. The six segments are contiguous, and the density of each segment declines from one end of the system to the other. *See* Baranowski/Fisher V.S., Figure 8, for a graphic depiction of the model. Messrs. Baranowski and Fisher assume that the SARR consists of the first two segments, which are the two highest density segments on the system. The model shows that for movements on the system that

traverse both the SARR segments and the off-SARR segments, original ATC allocates revenue based on the relative on-SARR and off-SARR costs. *See* Baranowski/Fisher V.S. at Table 3. The Board made it clear in *Major Issues* that "[a] successful allocation of cross-over revenues would produce the same revenue-to-cost relationship as would be produced if the complainant modeled the entire movement." *Major Issues*, slip op. at 35. Original ATC demonstrably produces this "successful allocation of cross-over revenues."

But under modified ATC, the allocation of revenues is no longer based on the relative on-SARR and off-SARR costs. Table 3 to the Baranowski/Fisher V.S. shows that modified ATC consistently allocates revenues to the high-density segments that exceed those segments' proportionate share of the system's total costs. Modified ATC therefore fails to achieve what the Board has described as a "successful allocation of cross-over revenues" and manifestly does not "produce the same revenue-to-cost relationship as would be produced if the complainant modeled the entire movement."

By assigning more revenue to the higher-density, on-SARR portion, modified ATC fails to address the proportionately higher fixed costs per unit on the lower-density off-SARR segments. Moreover, the misallocation of revenue increases as the difference in density between the on-SARR and off-SARR portions of the through movement increases. As Messrs. Baranowski and Fisher demonstrate in Table 3, the distortion created by modified ATC is greatest on the movement that traverses the entire system (Movement #6). As a result of these distortions, the SARR segments receive more revenue than necessary to cover their costs and the off-SARR portions receive too little revenue. *See* Baranowski/Fisher V.S. at Table 4. Modified ATC unquestionably creates a strong incentive for complainants to use cross-over traffic in their SAC analyses, particularly where they can create a short, high-density SARR. Modified ATC

thereby reintroduces the bias in favor of a shipper positing a truncated SARR with high-density cross-over segments, as opposed to a shipper that elects to build a full SARR. Modified ATC defeats the very purpose of original ATC.

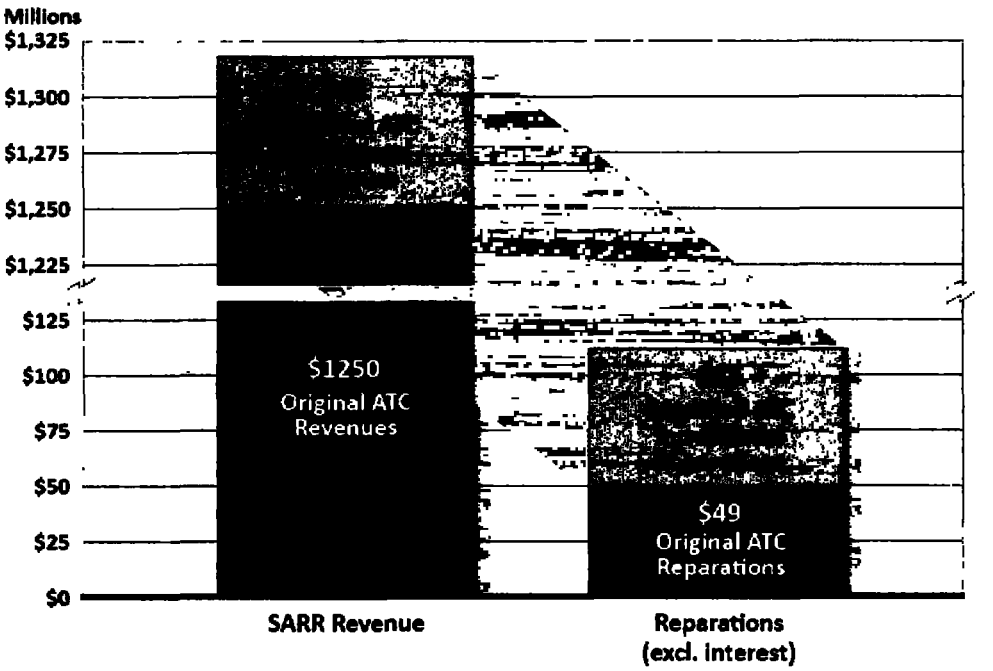
3. The Bias of Modified ATC is Apparent from the Actual Results in this Case.

To demonstrate how the application of modified ATC biases the analysis – and biased the outcome in this case – Messrs. Baranowski and Fisher have calculated the percentage of through revenue allocated to each movement in the WFA/Basin shipper group under both original ATC and modified ATC and the actual share of total costs of the on-SARR portion of the movement. Exhibit 4 to the Baranowski/Fisher verified statement shows that under modified ATC, the percentage of through revenue allocated to the SARR for a given movement is different from and much higher than the ratio of SARR costs to average total costs. Since the on-SARR segments receive a share of the through revenues in excess of their share of the average total costs, the off-SARR segments receive revenues that are *less* than their share of average total costs, making it harder for the off-SARR segments to cover their costs. In contrast, under original ATC, the SARR receives revenues that are directly proportional to the SARR segment's share of average total costs. Indeed, under original ATC, each segment – on-SARR and off-SARR – receives revenues that are proportional to the segment's share of total costs, which is precisely the result that the Board intended with original ATC.

Exhibit 3 to the Baranowski/Fisher verified statement shows that the cumulative effect of the misallocation of revenue to the SARR under modified ATC is to allocate $12 million more in revenue to the SARR in a single year of the DCF period (2005) than would have been allocated to the SARR using original ATC. This misallocation persists for all years of the SAC analysis. Moreover, this misallocation of revenues from the use of modified ATC flows almost dollar-for-

dollar through to the reparations and rate prescription determined through the implementation of the maximum markup methodology ("MMM") rate-setting procedure. As Messrs. Baranowski and Fisher explain, virtually all of the misallocation of revenues to the SARR flows through to the rate prescription and damages. Over the reparations period 4Q 2004-2009, modified ATC misallocates to the SARR $68 million, resulting in increased reparations of S63 million.

Baranowski/Fisher Figure 9:
Effects of Modified ATC on Rate Prescription, 4Q 2004 through 2009



Thus, the misallocation of revenues under modified ATC is a predominant factor contributing to the unprecedented magnitude of rate relief in the Board's *February 2009 Decision* in this case. A large portion of that relief is attributable to the Board's reintroduction of bias into the SAC analysis by departing from the principal of neutrality in revenue allocation embodied in original ATC. On remand, the Board must eliminate this bias.

As noted previously, in *Xcel Appeal* the D.C. Circuit approved the use of cross-over traffic in the SAC analysis but noted that it might have reached a different conclusion if there was evidence "that the imprecision implicit in the use of cross-over traffic tends to overestimate the revenues generated by a SARR to a degree that outweighs any efficiency gains." *Xcel Appeal*, 453 F.3d at 483. If the Board fails to address the distortions caused by modified ATC and the inherent bias created in favor of short-haul SARRs using cross-over traffic, the Board would need to re-evaluate whether cross-over traffic with revenues allocated by modified ATC is in fact a valid simplification tool in the SAC analysis or whether the distortions introduced by modified ATC outweigh the efficiency gains of SARRs that rely on cross-over traffic.

B. The Board Should Find On Remand That ATC Is The Proper Methodology For Allocating Revenues On Cross-Over Traffic.

The Board did not have an affirmative reason for adopting a methodology that double-counts variable costs on movements that generate contribution to cover fixed costs. The Board has never claimed – much less demonstrated – that double-counting variable costs on high-rated traffic produces a superior estimate of the relative on-SARR and off-SARR costs of those movements. Instead, modified ATC, with its double-counting of variable costs, was adopted solely to deal with a perceived problem with the allocation of revenues by original ATC on low-rated movements that did not receive sufficient revenues under ATC to cover the incumbent's variable costs on the on-SARR portion of the movement. If it were not for the Board's view that low-rated traffic should receive at least enough revenue to cover the incumbent's variable costs (or a proportionate share of the incumbent's variable costs on movements that produced no contribution on the through movement), the Board would have had no reason to abandon original ATC.

On remand, the Board should reexamine the rationale for modifying ATC to include a double-count of variable costs and thereby reintroducing the bias that ATC was supposed to eliminate. As explained below, there was no valid reason for the Board to be concerned about the treatment of low-rated traffic under original ATC, and therefore there was no valid reason to adopt a methodology that distorts SAC results and creates a bias in favor of SARRs featuring short-haul cross-over movements by double-counting variable costs. The Board should find on remand both that modified ATC is biased. and that original ATC, which was adopted in a broad rulemaking and approved by the D.C. Circuit, continues to be the proper methodology for allocating revenue on cross-over traffic.

1. ATC Results On Low-Rated Traffic Are Not "Illogical."

When the Board adopted modified ATC. it explained that it was abandoning original ATC because original ATC produced an "illogical and unintended result" by allocating revenue to the on-SARR segment of some movements that is insufficient to cover the incumbent's variable costs. *2008 Recon. Decision*, slip op. at 4; *February 2009 Decision,* slip op. at 13. In its brief to the D.C. Circuit on appeal of the *February 2009 Decision*, the Board explained that its concerns about the "illogical" results produced by original ATC had to do with supposed cross-subsidies: "[T]o the extent the original ATC methodology resulted in revenue allocations that did not cover attributable costs, it violated the core SAC prohibition against cross-subsidies and was thus 'illogical'." *STB Brief* at 59. Although the Board provided no further explanation, it appears to have assumed that a movement (or segment of a movement) generating revenue below URCS variable costs fails to cover its "attributable costs" and therefore is dependent upon revenues from other movements (or other segments of the through movement) to cover its costs. But the Board has squarely rejected that assumption in the past.

The Board has repeatedly made it clear that "an R/VC ratio below 100% does not necessarily reflect improper pricing or money-losing service." *Simplified Standards For Rail Rate Cases*, STB Ex Parte No. 646 (Sub-No.1), slip op. at 21 (STB served July 28, 2006) ("*Simplified Standards NOPR*"); *see also B.P. Amoco Chemical Co. v. Norfolk Southern Railway Co.*, Docket No. 42093, slip op. at 9 (STB served June 6, 2005). The Board explored this issue in detail in Ex Parte 347 (Sub-No.2). *Rate Guidelines – Non-Coal Proceedings* ("*Non-Coal Guidelines*"), 1 S.T.B. 1004 (1996), in connection with its use of the RSAM (Revenue Shortfall Allocation Method) benchmark. RSAM calculates the average markup over variable costs that would be needed from demand-inelastic traffic for the carrier to recover its total costs. In *Non-Coal Guidelines*, the Board addressed the question whether to automatically adjust its RSAM standard to "relieve captive shippers from cross-subsidizing any traffic not covering its own (attributable) costs." *Non-Coal Guideline*, 1 S.T.B. at 1027. The RSAM adjustment would have eliminated the effects of the supposed cross-subsidy by excluding from the RSAM calculation all traffic that generated revenue below URCS variable costs. But the Board decided not to implement the proposed adjustment because it rejected the claim that a movement was being cross-subsidized just because it generated revenues below its URCS variable costs: "We agree that the URCS costs may include a significant portion of what may actually be unattributable joint and common costs." *Id.* at 1028. Thus, a movement generating revenue below 100% of URCS variable costs may still be contributing to unattributable costs and would not be receiving a cross-subsidy from other traffic.

The rail competition study recently commissioned by the Board confirms that it would be inappropriate to rely on URCS to determine whether rail prices are sufficient to cover attributable costs: "The presence of large fractions of below-variable-cost traffic suggests that the

R/VC extremes are due in substantial part to latent cost-causing factors or other shipment features that are not reflected in the measured variable costs." Christensen Associates, *A Study of Competition in the U.S. Freight Railroad Industry and Analysis of Proposals that Might Enhance Competition*, at 11-25 (November 2008). An updated version of that report found that 34% of railroad ton-miles had revenues below 100% of URCS variable costs in 2008. Christensen Associates, *An Update to the Study of Competition in the U.S. Freight Railroad Industry*, at 5-18 (January 2010) ("large shares of rail traffic moving at rates below 100 percent R/VC suggested that URCS variable costs may not be well aligned with actual shipment-level cost characteristics.")

In addition, any analysis as to whether a particular revenue allocation involved a cross-subsidy would appropriately focus on whether the revenue allocated to the SARR on a given movement is sufficient to cover its attributable costs on the SARR, not on the incumbent. Cross-over traffic is a device to facilitate simplification of the full SAC analysis. There is no cross-over movement in the real world, so there is no fragmented movement in the real world that is capable of being cross-subsidized. The cross-over segment of a movement is only an assumed hypothetical segment of a longer through movement, and there is no rate for that hypothetical segment in the real world. It therefore makes no sense to think of revenues on one segment of a real-world through movement as subsidizing another hypothetical segment of such a movement.[10] Moreover, even if that concern made sense, a hypothetical cross-over movement

[10] In a related context, the courts, ICC and the Board have recognized that the reasonableness of a rate must be considered on a through basis. *Central Power & Light Company v. Southern Pacific Transportation Co.*, 1 S.T.B. 1059, 1072-74 (1996); *Great Northern Ry. V. Sullivan*, 294 U.S. 458, 462-63 (1935). It makes no sense to think about the revenues on one segment of a movement as being reasonable while the revenues on another segment of the same through movement are unreasonable. Similarly, it makes no sense to think of one segment of a through movement as subsidizing another segment of a through movement.

could receive a cross-subsidy only if that movement did not generate revenues sufficient to cover its attributable costs on the hypothetical SARR. The incumbent's costs are irrelevant. That is why the Board's cross-subsidy analyses have always focused on whether traffic on a SARR covers its attributable costs *on the SARR*, not on whether the traffic covers an apportionment of the defendant's URCS costs.[11]

The Board's concern about the "illogical" results produced by ATC also overlooked the important role of traffic selection in the SAC analysis. The complainant in a SAC case is permitted to select the SARR traffic group in the interest of maximizing the revenue contribution made by traffic that shares facilities with the issue traffic. One way to maximize contribution is to eliminate from the traffic group movements that do not contribute to fixed costs. WFA/Basin took full advantage of its traffic selection prerogative in the reopening and eliminated low-rated traffic that had been included in its prior SAC presentation. Complainants in future full SAC cases are similarly in a position to avoid selecting movements for the SARR traffic group that they believe fail to contribute revenues to the fixed costs of the SARR. It makes no sense to reintroduce bias into the revenue allocation procedure to deal with a problem that the complaining shipper can avoid in the traffic selection process.[12]

In its brief to the D.C. Circuit, the Board rejected the idea that the complainant's traffic selection prerogative is an effective way of dealing with the perceived cross-subsidy problem in a full SAC case because complainants in Simplified SAC cases do not have that prerogative.

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[11] *See PPL Montana, LLC v. Burlington Northern And Santa Fe Railway Co.*, Docket No. 42054, slip op. at 10-12 (STB served Aug. 20, 2002); *Otter Tail Power Co. v. BNSF Railway Co.*, Docket No.42071, slip op. at 23-30 (STB served Jan. 27, 2006).

[12] In *N.C. Utils. Comm'n v. FERC*, 42 F.3d 639, 665-66 (D.C. Cir. 1994), the D.C. Circuit found that it was arbitrary for the FERC to address its concerns about a pipeline's financial risk through what amounted to "double dipping," *i.e.*, imposing two independent solutions to a problem when one solution would have sufficed.

STB Brief at 66. It is not rational for the Board to accept a biased revenue allocation method in full SAC cases where a better method exists simply because it believes it has no choice but to rely upon the less accurate method in Simplified SAC cases. When the Board adopted its Simplified SAC standards, it realized that some of the methodologies used to simplify the SAC analysis – like limits on traffic selection – were departures from CMP principles. While those departures from CMP were necessary to make Simplified SAC a workable methodology in smaller cases, the Board emphasized that "CMP and its SAC test remains our preferred method for assessing the reasonableness of a challenged rate." *Simplified Standards NOPR*, slip op. at 11. The trade-off for compromising CMP principles in Simplified SAC cases was a limit on the amount of damages that could be recovered by a complainant from a railroad under the Simplified SAC methodology. *Simplified Standards for Rail Rate Cases*, STB Ex Parte No. 646 (Sub-No. 1), slip op. at 28 (STB served Sept. 5, 2007) (limits on relief under simplified approaches assure carriers "that a large rate dispute will not be subjected to a more simplified process than necessary").

There is no reason to allow the departures from CMP adopted in Simplified SAC cases to determine the way CMP is implemented in full SAC cases. There are no limits in full SAC cases on the amount of reparations that might compensate for the lack of precision that results from the use of a methodology that departs from CMP principles. Indeed, the use of modified ATC in this case increased BNSF's reparations by over $60 million. Even if use of modified ATC were necessary in Simplified SAC cases because the complainant cannot select its traffic group in those cases, that is no reason to use modified ATC in full SAC cases where complainants are fully able to exclude from the SAC analysis low-rated traffic that they determine does not make sufficient contribution to coverage of SARR costs.

2. The Board's Fairness Concern Failed To Consider The Enormous Adverse Impact On Defendants From Double-Counting Variable Costs.

The Board's decision to abandon ATC also relied heavily on a "fairness" concern. The Board explained to the D.C. Circuit that ATC could be unfair to complainants because "applying the original ATC revenue-allocation method to a traffic group with low-rated traffic could allocate to the on-SARR segment less revenue than the defendant's variable costs for that segment, thus understating any potential overcharge and any resulting rate relief potentially available to the complainant." *STB Brief* at 61. The Board's explanation of its fairness concern ignores the goal of original ATC. The objective of original ATC is to leave the shipper no better or worse off than if it had undertaken the more complicated task of positing a full SARR. Thus, if ATC properly allocates revenues to produce the same results as a full SAC analysis, there would be no understatement of potential relief and no unfairness.

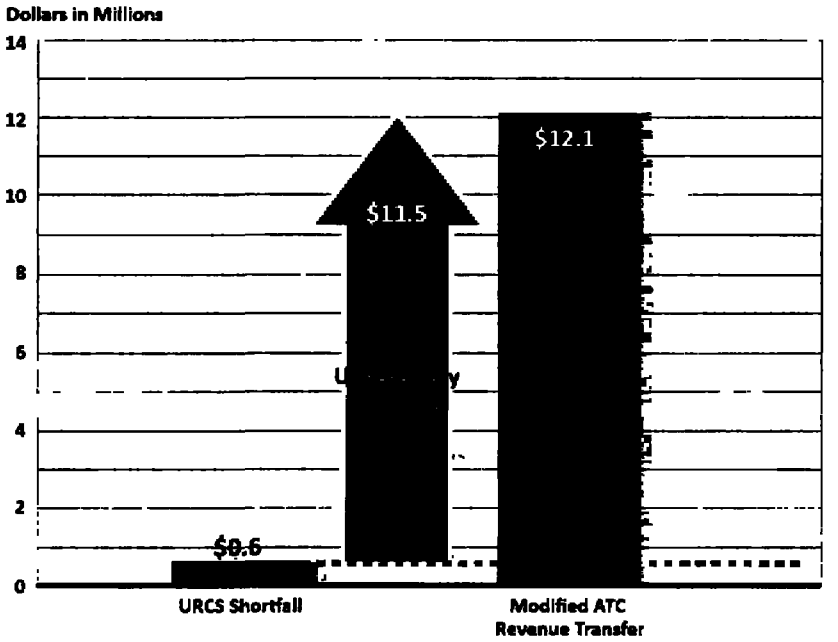
But even if the allocation of revenue to the SARR below the incumbent's variable costs were "unfair" to complainants because it "understate[es] any potential overcharge" on some movements, the Board failed to consider the other side of the fairness equation, *i.e.*, the adverse impact on defendants resulting from the bias that modified ATC introduces into the SAC analysis by double counting variable costs on all other movements. As matters played out in this case, the adverse impact on BNSF from double-counting variable costs in the revenue allocation process vastly outweighed any marginal impact on WFA/Basin from the understatement of any potential overcharge that would result from allocating revenues on some movements that are below the defendant's variable costs.

As shown in Exhibit 3 to the Baranowski/Fisher V.S., very few of the movements on WFA/Basin's SARR were allocated revenues under original ATC that were below BNSF's variable costs for the on-SARR portion of the movement. When WFA/Basin restated their

traffic group, they exercised their traffic selection prerogative to eliminate low-rated traffic. There were only three movements with revenues under original ATC that were below BNSF's URCS costs on the on-SARR segment of the movement, and on those movements the revenue shortfall in 2005 was very small – just under $600,000 in the aggregate. Using original ATC, the SARR's total 2005 revenues would be over $200,000,000, so the supposed shortfall would represent less than 0.3 percent of SARR revenues.

In contrast to the relatively small revenue shortfall of $600,000 for 2005 on three low-rated movements under original ATC, modified ATC shifted more than $2.7 million on those movements, and more than $12 million on all cross-over movements, from the residual incumbent to the SARR in 2005 – *20 times* the amount of revenues needed to address the shortfall problem. *See* Baranowski/Fisher Figure 4, reproduced below.

Baranowski/Fisher Figure 4:
STB's Modified ATC Transfers Considerably More Revenue to the SARR than the Variable Cost Shortfall



More than $9 million of this revenue shift occurred on movements that fully covered the incumbent's URCS costs under original ATC. There was nothing about those particular movements that required any adjustment to the original ATC allocation under the Board's stated rationale. The Board did not need to double-count variable costs on those movements to ensure that they contributed sufficient revenues to cover the incumbent's variable costs, since the allocation of revenue on those movements to the SARR already covered the incumbent's variable costs for the on-SARR segment under original ATC.

The adverse impact on BNSF of the revenue transfer resulting from the adoption of modified ATC far outweighed the minor impact on WFA/Basin from the supposed shortfall that occurred on a few movements under original ATC. As noted above, BNSF's witnesses Baranowski and Fisher show that as a result of the revenue shift from the off-SARR to the on-SARR segments of the cross-over movements under modified ATC, the SARR revenues were increased by $68 million over the period 4Q 2004-2009, resulting in an increase in BNSF's reparations of the vast preponderance of that revenue shift, or $63 million. Only a small fraction of the revenue transfer to the on-SARR segments of the cross-over movements would be needed to address the revenue shortfall produced by the handful of movements that received revenues below URCS variable costs under original ATC. An objective assessment of the fairness of the Board's revenue allocation process leads to the conclusion that the Board's attempt to address a minor "understatement" of rate relief to the complainants resulted in an enormous overstatement of the relief due from BNSF.

Moreover, the Board had no need to adopt a methodology that unfairly and disproportionately affected BNSF in order to deal with a handful of movements that, under ATC, generated revenues below the incumbent's variable costs. The Board could have used a fairer

and more straightforward approach to deal with its concerns about cross-subsidy that did not involve a massive revenue transfer to the SARR and a correspondingly massive increase in BNSF's reparations.

In its brief to the D.C. Circuit, the Board criticized BNSF for not offering a specific alternative methodology to modified ATC: "[i]f BNSF believed there was a more equitable way to allocate revenue contribution that would avoid the potential cross-subsidization problem identified in the 2007 Decision, BNSF had ample opportunity to suggest such an alternative. Instead, BNSF merely asked the Board to go back to the flawed ATC procedure." *STB Brief* at 64-65. In fact, in BNSF's Petition for Reconsideration BNSF noted that "even if there were a valid reason to ensure that the SARR receives sufficient revenues to cover the incumbent's variable costs, which there is not, there is no reason to apply the modified ATC methodology to all cross-over traffic, including high rated traffic." BNSF Railway Company's Petition for Reconsideration, *Western Fuels Association, Inc. v. BNSF Railway Co.*, STB Docket No. 42088, at 19 (filed Oct. 22, 2007). While BNSF did not propose a specific methodology for addressing the Board's concerns about cross-subsidy, since none should have been necessary, BNSF did suggest that the objectives of ATC did not have to be compromised in dealing with movements that were allocated revenues less than the incumbent's variable costs.

Although BNSF does not advocate its use, BNSF's witnesses Messrs. Baranowski and Fisher describe in their attached verified statement a simple approach that the Board could use to eliminate any cross-subsidy concerns on low-rated traffic without creating the distortion in revenue allocation from high-rated traffic that results from double-counting variable costs on that traffic. Specifically, the Board could apply the following two-step process. In the first step, the Board would allocate revenue on all movements using original ATC. In the second step, the

Board would determine if any movements received on-SARR revenues under step 1 that are below the defendant's URCS variable costs for movement over the on-SARR segment. As to those movements, and those movements *only*, the Board could allocate additional revenues to the SARR based on relative on-SARR and off-SARR variable costs up to 100% of the defendant's URCS variable costs. In this way, the Board could deal with the problem of below-cost revenues by focusing exclusively on the movements that receive revenues below the incumbent's variable costs. As to all other movements, the Board would allocate revenues in accordance with original ATC, which takes fixed costs into account and properly reflects economies of density.

As shown by Messrs. Baranowski and Fisher, if the Board were to persist in believing that it is inappropriate to allocate revenue on cross-over movements below the incumbent's variable costs and could provide a rational explanation for that belief, there are far superior ways of addressing such concerns about original ATC's treatment of low-rated traffic that would preserve the original benefits that ATC was intended to bring with minimal disruption to the original approach.

C. The Board's Concern About The Revenue Allocation On Low-Rated Traffic Under Original ATC Did Not Justify Double-Counting Variable Costs On Other Traffic.

The Board has never suggested that there is an affirmative justification for modified ATC and the double-counting of variable costs that would apply to the majority of movements on which revenue is allocated. On the vast majority of movements, original ATC allocates revenues exactly as the Board intended in *Major Issues* without any problem or distortion. In contrast, modified ATC results in palpable distortions in cross-over revenue allocation across the Board and consequently biases SAC results. The most that can be said for modified ATC is that it deals with a perceived problem in the application of original ATC that is limited to low-rated

movements. But as shown above, modified ATC deals with this limited problem in a way that is vastly disproportionate to the size of the problem and completely unfair.

The case law is clear that an agency acts arbitrarily when it imposes a remedy that is disproportionate to the magnitude of the harm being remedied. In *Dominion Res., Inc. v. FERC*, 286 F.3d 586, 593 (D.C. Cir. 2002), a case involving the merger of an electric power company and a natural gas pipeline, FERC imposed broad restrictions on communications within the post-merger entity that went far beyond what was necessary to address FERC's concerns about possible downstream anti-competitive effects of the merger. The Court struck down FERC's restrictions because the agency "used a tank to block a mousehole." *Id.* at 593. *See also*, *Associated Gas Distribs. v. FERC*, 824 F.2d 981, 1019-20 (D.C. Cir. 1987) ("the disproportion of remedy to ailment would, at least at some point, become arbitrary and capricious").

The adoption of modified ATC was not a rational response to the problem the Board found with ATC. The adverse impact that results from double-counting variable costs in allocating revenue on movements that already cover the defendant's URCS costs vastly exceeds the magnitude of the supposed cross-subsidy problem on movements that did not receive revenues sufficient to cover the incumbent's variable costs. The Board should not have adopted a new methodology that created a far larger problem of unfairness to defendants than the supposed problem with original ATC that it was intended to fix.

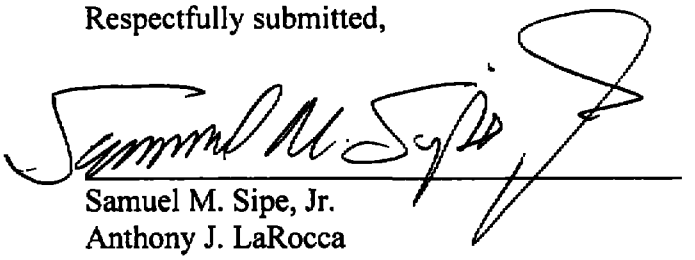
To rectify this error, the Board should re-calculate the SAC results set forth in its *February 2009 Decision* using original ATC to allocate revenues on all movements in WFA/Basin's cross-over traffic group. The Board did not have a valid reason to be concerned about the allocation of revenues under ATC to certain low-rated movements that were below the incumbent's variable costs for the on-SARR portion of the movement and the Board was not

justified in adopting a solution to this supposed problem that went far beyond what was necessary to address the supposed problem.

IV. CONCLUSION

For the reasons set forth above, the Board should find on remand that the ATC methodology originally adopted in *Major Issues* is the proper methodology for allocating revenues on cross-over traffic in this case and other full SAC cases and should restate the SAC results from the *February 2009 Decision* using original ATC.

Respectfully submitted,



Richard E. Weicher
Jill K. Mulligan
BNSF Railway Company
2500 Lou Menk Drive
Fort Worth, TX 76131
(817) 352-2353

Samuel M. Sipe, Jr.
Anthony J. LaRocca
Frederick J. Horne
Steptoe & Johnson LLP
1330 Connecticut Avenue, N.W.
Washington, DC 20036
(202) 429-3000

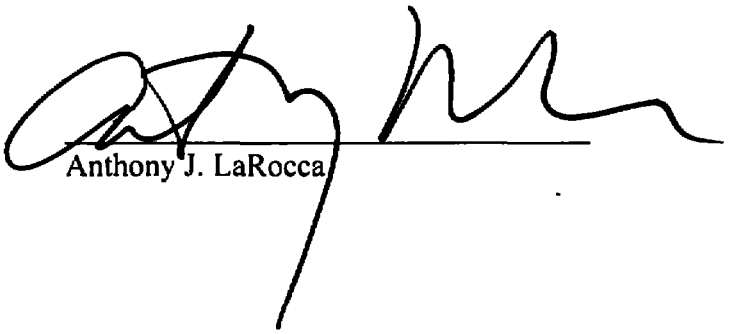
Attorneys for BNSF Railway Company

November 22, 2007

CERTIFICATE OF SERVICE

I hereby certify that this 22nd day of November, 2010, I served a copy of BNSF's Comments on Remand on the following by hand delivery:

John H. LeSeur
Slover & Loftus
1224 Seventeenth Street, N.W.
Washington, DC 20036



Anthony J. LaRocca

JOINT VERIFIED STATEMENT

of

MICHAEL R. BARANOWSKI

and

BENTON V. FISHER

I. Introduction

We are Michael R. Baranowski and Benton V. Fisher. We are Senior Managing Directors in FTI Consulting's Network Industries Strategies practice with offices at 1101 K Street, NW, Washington, DC 20005. Statements of our qualifications are set forth in Exhibits 1 and 2, respectively. We have been asked by BNSF Railway Company to review the Board's revenue allocation procedures as they relate to the Laramie River Railroad (LRR) stand-alone system and to determine if the Board's modified Average Total Cost (ATC) revenue allocation methodology, adopted in September 2007, improperly double counts variable costs in the allocation of through revenues of the incumbent BNSF to the LRR. Based on our analysis we conclude:

- Modified ATC biases the cross-over revenue allocation in favor of the higher-density SARR because it double counts variable costs and reduces the effects of economies of density.
- The issue that precipitated the Board's change to the original ATC formula was essentially eliminated when WFA/Basin reconfigured the SARR traffic group.
- Modified ATC unfairly overcorrects for the Board's perceived problem of an unintended shortfall of on-SARR revenue allocation below the incumbent's variable cost.
- The Board should use original ATC.

- If the Board believes it must modify ATC to address what it perceives to be a problem with applying original ATC to low-rated traffic, alternatives exist that would avoid the massive and unnecessary distortion caused by modified ATC.

The Board's stated purpose of ATC is to allocate cross-over traffic revenues consistent with the relative total costs incurred by the real world defendant over the following two segments of through movements resulting from the use of cross over traffic: (1) the on-SARR segments of the through movements assumed to be replicated by the hypothetical new entrant; and (2) those off-SARR line segments assumed to remain with the residual incumbent. For regulatory purposes, total railroad costs are classified among two types – those that vary with changes in traffic levels (variable costs) and those that do not vary with changes in traffic levels (fixed costs). In adopting ATC, the Board recognized that it is critical that both cost categories be accurately represented in any cost-based revenue allocation, and in its original ATC formulation the Board prescribed the method for correctly calculating the relative total cost for the on-SARR and off-SARR segments. The original ATC cost formulation is set forth below.

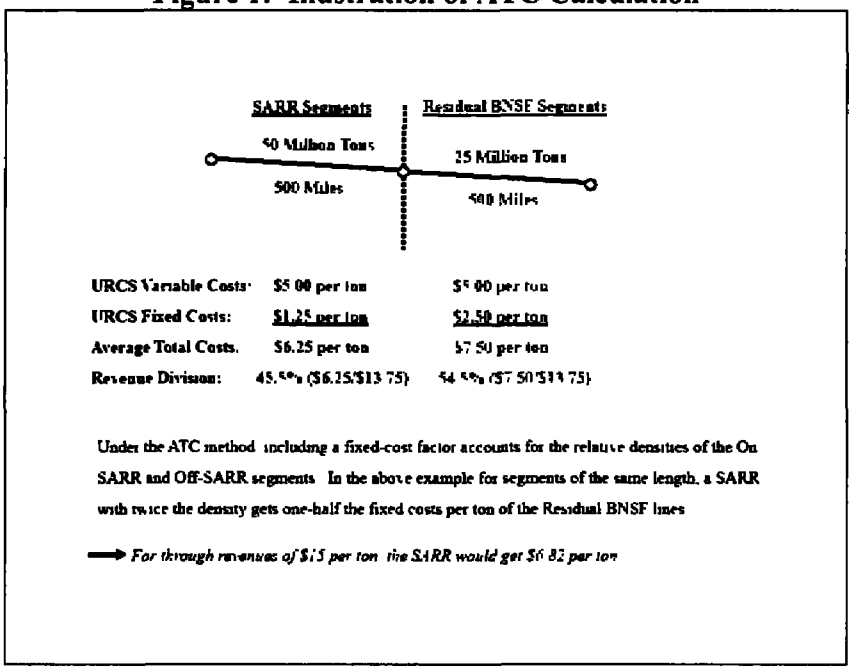
$$\text{SARR Revenue} = \frac{VC_{SARR} + FC_{SARR}}{ATC_{Total}} * \text{Through Revenue}$$

A hypothetical example demonstrates how ATC is applied. Consider a through movement of 1,000 miles, for which the defendant collects $15 per net ton. The SARR segments are assumed to comprise half of the through route, including segments with an average density of 50 million tons, that is twice that of the segments left for the residual (25 million tons). Assuming variable cost of $0.01 per ton-mile and fixed costs of $125,000 per mile, average variable costs of $5.00 per ton[1] are calculated for each of the on-SARR and off-SARR segments, and fixed costs are determined to be $1.25 per ton for the on-SARR segment and $2.50 per ton for the off-SARR

[1] $0.01 per ton-mile x 500 miles = $5.00 per ton

segment.[2] Based on these parameters, the SARR represents $6.25 in total costs ($5.00 + $1.25), out of total costs for the through movement of $13.75, and would be allocated 45.5% ($6.25 / $13.75) of the through revenues, or $6.82 per ton. The following figure presents the calculation.

Figure 1: Illustration of ATC Calculation



In its September 10, 2007 decision in this proceeding,[3] the Board observed that application of the ATC formula to the movements in WFA/Basin's initial traffic group, which was selected by complainants to maximize revenue allocations to the SARR under the modified straight mileage prorate (MSP) approach, resulted in a number of the moves within the original LRR traffic group with allocated revenues below or just barely above BNSF's URCS variable cost for the on-SARR segment. The Board stated, with no explanation of the basis for its determination, that a revenue-allocation methodology that assigned SARR revenues below their associated URCS variable costs was both illogical and unintended. Without seeking input from the parties or from

[2] $125,000 per mile x 500 miles = $62.5 million. $62.5M / 50M tons = $1.25 per ton; $62.5M / 25M tons = $2.50 per ton.

[3] *Western Fuels Association, Inc. v. BNSF Railway Co.*, STB Docket No. 42088 (served Sept. 10, 2007).

the public in the form of a reopened rulemaking, the Board then changed the ATC formula to use average total costs to allocate only that portion of revenue on a through movement that represented contribution above variable costs. Revenues up to the corresponding variable costs for the on- and off-SARR segments would be allocated solely on the basis of the relative variable costs.

In the remainder of this statement we discuss the practical and conceptual problems with the Board's modified ATC formulation. In Section II, we outline the circumstances that might have led the Board initially to conclude that there was a problem with the original ATC formulation and demonstrate that the problem essentially disappeared when complainants were no longer incented by MSP to overload the SARR with short-haul traffic. We also demonstrate that the Board's proposed remedy produced a severe overcorrection to the perceived problem. In Section III, we outline the conceptual flaw in the Board's modified ATC formulation that double counts the effects of variable costs while understating the effects of economies of density, and demonstrate the bias that the new formulation introduces to the SARR revenue allocation. In Section IV, we explain that this bias, which arbitrarily overstates the amount of revenue from cross-over traffic available to the SARR, translates directly to a reduction in the rates prescribed to the issue traffic under the Board's Maximum Markup Methodology (MMM) rate prescription formula. In Section V, we outline an alternative approach that would address the Board's concern relative to revenues below variable costs in a manner that eliminates in large measure the bias in revenue allocation introduced by modified ATC.

II. The Shipments From the Original LRR Traffic Group With Allocated SARR Revenues Below Variable Costs Were Largely Eliminated When Complainants Refined Their Traffic Group

In its September 10, 2007 decision, the Board observed that the SARR traffic group included a considerable number of low-rated movements that produced revenue below or just barely above variable cost. It also observed that movements traversing the higher-density SARR were given proportionately less revenue relative to variable costs than the off-SARR segments by the ATC formula because of the density component. When ATC was applied to these low-rated movements, the SARR received revenues below BNSF's URCS variable costs for the on-SARR portion of the movement. The overall "shortfall" below variable cost in allocated revenues for the on-SARR portion of moves in the 2005 LRR original traffic group was approximately $7.0 million.[4] Apparently it was the existence of this shortfall that led the Board to change the ATC formula.

When complainants revised the LRR network configuration and traffic group in response to the Board's September 10 invitation, the issue of SARR movements with allocated revenues below variable costs virtually disappeared. In contrast to the initial traffic group, all of the shipments that complainants included in their reconfigured SARR traffic group had through revenues that exceeded URCS variable costs. There were only three origin-destination pairs included in the revised traffic group for which original ATC allocated SARR revenues that fell below URCS variable cost for the on-SARR segment. The variable-cost shortfall for these three moves totals $591,000 in 2005, less than 0.3% of that single year's SARR revenues, essentially eliminating any need for adjustment. Exhibit 3 identifies the movements in the LRR traffic group for which original ATC allocates revenues below variable cost and compares the SARR

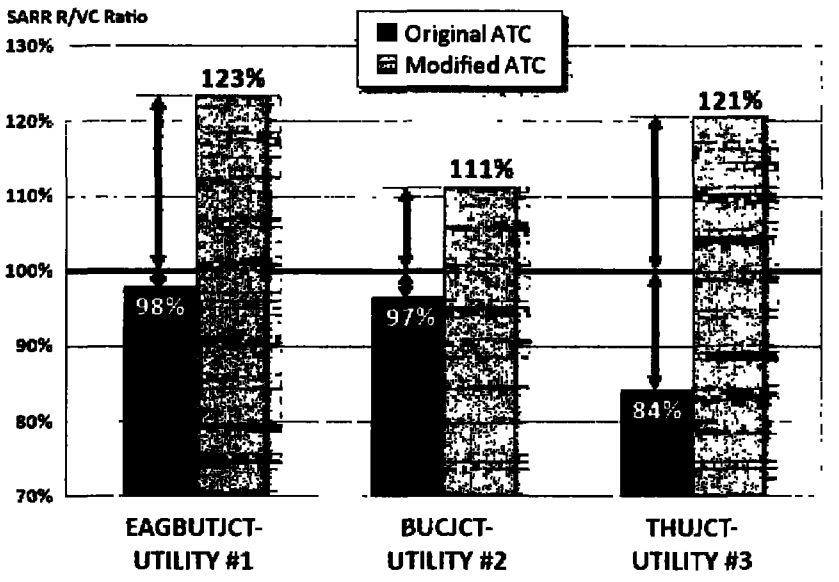
[4] BNSF workpaper "STB LRR Traffic and Revenues BNSF 3-26-07 Reply URCS Comp.xls," worksheet "SARR Traffic_2005"

revenues under original ATC and the modified ATC formulation by individual LRR movement. along with the corresponding SARR R/VC ratios.

As Exhibit 3 shows, application of modified ATC went far beyond simply correcting the revenue shortfall on the three movements. Application of the modified ATC formula to the three moves in the revised traffic group increased the SARR revenue allocation on those movements alone by more than $2.7 million. Since the revenue shortfall was less than $600,000, application of modified ATC allocated to the SARR *more than three times* the revenues needed to address the shortfall, thereby overcompensating the SARR by $2.1 million on those three movements alone.[5] Figure 2 below compares the revenue allocation in relation to variable cost on the three moves under ATC and modified ATC.

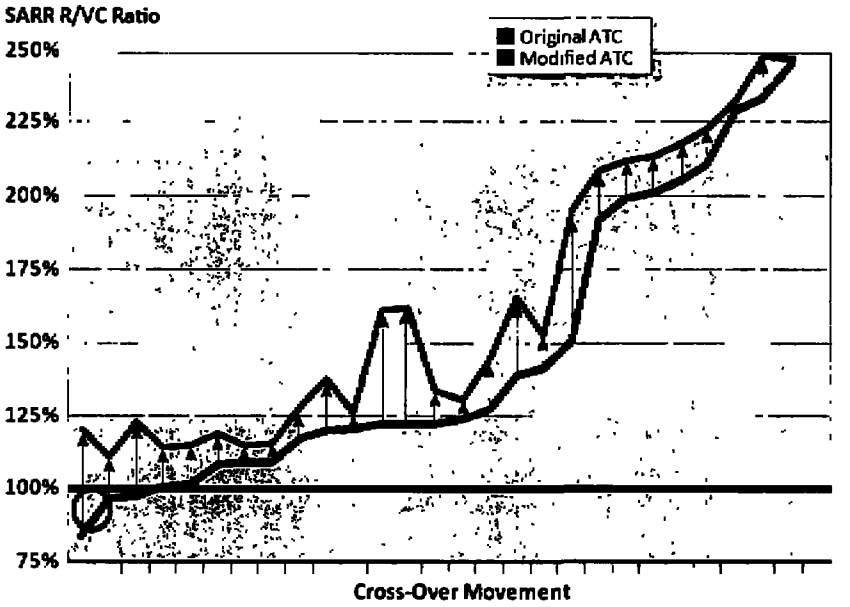
[5] BNSF workpaper "STB LRR Traffic and Revenues BNSF 3-26-07 Reply_1 Alt ATC.xls," worksheet "SARR Traffic_2005"

Figure 2: STB's Modified ATC Overcompensates for Variable Cost Shortfall



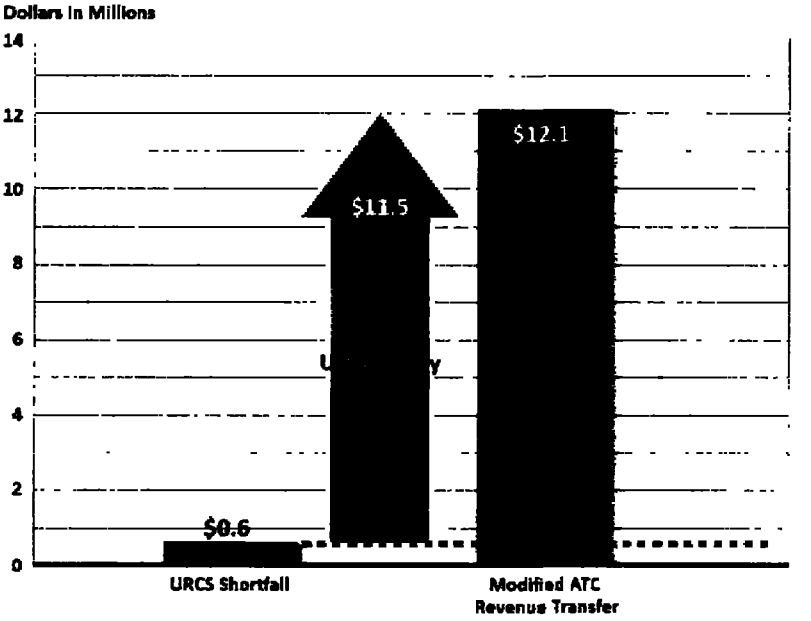
Moreover, the modified ATC formula allocates an additional $9.4 million in 2005 to the SARR for origin-destination pairs for which original ATC already allocates revenues comfortably above URCS variable cost. Figure 3 below shows that modified ATC increases the SARR revenues for every cross-over movement, including the vast majority of movements that already received revenues under original ATC that exceed variable costs.

Figure 3: Modified ATC Increases R/VC for All Movements, Including Many for which There is No Variable Cost Shortfall



In total, modified ATC shifts more than $12 million in 2005 revenue to the SARR to address a perceived revenue shortfall of less than $600,000, as shown in Figure 4 below.

Figure 4: STB's Modified ATC Transfers Considerably More Revenue to the SARR than the Variable Cost Shortfall



III. Conceptual and Practical Flaws With the Board's Modified ATC Formulation

As noted above, the Board's stated purpose of ATC is to allocate cross-over traffic revenues based on the relative costs incurred by the real world defendant on the on-SARR and off-SARR segments of the through movement. And in the supplemental evidence filed after the Board adopted ATC but before the Board issued a decision in September 2007, each party submitted ATC calculations based on the formulation originally described by the Board that assigned the through revenues to on-SARR and off-SARR segments following the formula presented on page [X]. Under that approach, the variable costs and fixed costs are added together, and that amount is used to assign revenues. The results of that first application of ATC reflect the Board's stated objective: a revenue-allocation approach that maintains the same relationship of revenues to total costs on each portion of the movement.

Exhibit 4 shows that original ATC, when applied to the reconfigured traffic group that complainants used in their second SAC presentation, continues to implement the Board's objective to maintain the same relationship of revenues to total costs on each portion of the movement. Under original ATC, the LRR receives a percentage of the through revenues that is equal to the LRR's percentage of total costs. And Exhibit 4 also shows that modified ATC fails to maintain that revenue-to-cost relationship and consistently allocates to the LRR revenues in excess of the LRR's portion of total costs. The reason for this result is that modified ATC double counts variable costs in allocating revenues and thereby dilutes the impact of economies of density in the revenue-allocation formula. Under modified ATC, high-density SARRs consistently receive revenues that are substantially in excess of their share of total costs.

The Board's modified ATC formula is shown below:

$$\text{SARR Revenue} = VC_{SARR} + \frac{VC_{SARR} + FC_{SARR}}{ATC_{Total}} * \text{Contribution}$$

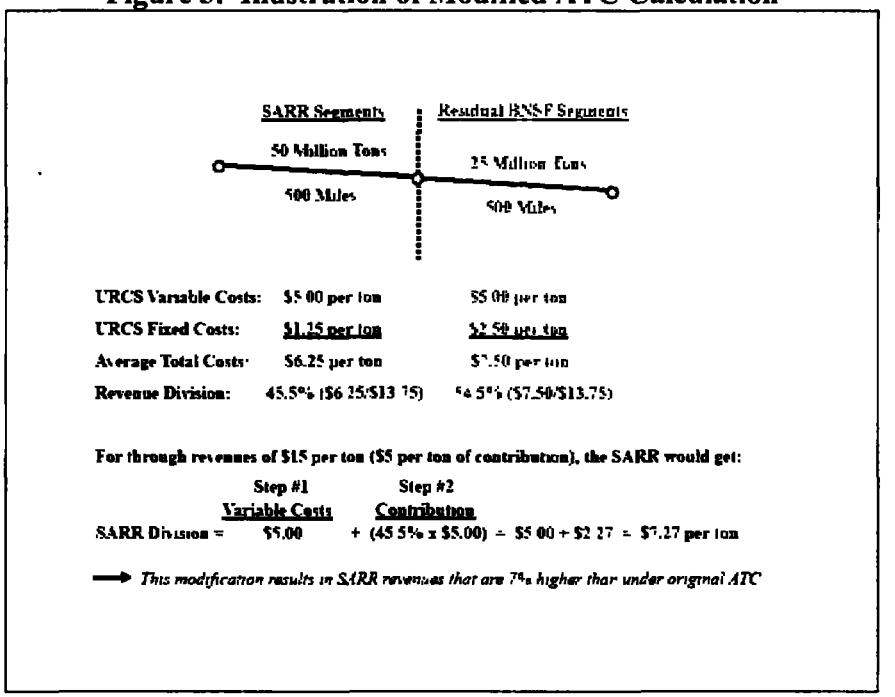
In its modified ATC approach, the Board introduced an additional step into the calculation, one that distorts the revenue allocation by understating fixed costs and hence the effects of density. As the formula shows, variable costs are double counted in that they are used in each of the two steps of the revenue allocation process whereas fixed costs are used only once. The first step assigns revenues equal to variable costs, without considering fixed costs – or economies of density. The second step allocates revenues in excess of variable costs based on original ATC, which considers variable and fixed costs. While the ATC weightings reflect the appropriate relationship of segment costs to total costs and therefore the relative economies of density, they are applied only to the contribution subset of the revenues (if any). When the revenues determined in this step are combined with the portion of revenues that are allocated in the first

step – exclusively on the basis of variable costs – the effect is to allocate disproportionately more revenues on the basis of variable costs, as they are counted twice in the allocation calculations. This results in a dilution of the relative weighting of fixed costs, and a failure of the allocated revenues to achieve the objective of ATC.

The hypothetical example presented earlier can be used to demonstrate how modified ATC is applied. For the same movement with total revenues of $15 per net ton and on-SARR and off-SARR segments of equal lengths of 500 miles each, $5 per ton is allocated to the SARR in the first step, based on the variable costs for the on-SARR segment. The contribution above variable costs for the through movement – $5 per ton – is then allocated to the on-SARR segment in the second step, based on its relative proportion of total costs for the through movement. In this step, the 45.5% that was calculated above in the ATC example is used, reflecting the on-SARR segment's share of average total costs. Step two would add $2.27 (45.5% of $5) to the SARR revenues, producing total revenue of $7.27 per ton. Although the average total costs of the SARR segments comprise 45.5% of the total, under modified ATC the SARR collects 48.5%. In this simple example, the higher-density SARR segments are over-allocated 7% more revenues[6] at the expense of the off-SARR segments that are not allocated sufficient amounts to account for their higher fixed costs per ton. The following figure presents the calculation.

[6] 0.485 / 0.455 = 1.067

Figure 5: Illustration of Modified ATC Calculation



The problem with giving excessive weight to variable costs is that variable costs do not reflect economies of density. Economies of density reflect how average total costs for a network of a given size initially decrease with increases in output. In the ATC formulation, the relative economies of density of line segments carrying different levels of traffic are only captured in the fixed costs component which is calculated by dividing segment specific fixed cost by segment specific densities. Thus, by counting variable costs twice in the revenue allocation, the impact of economies of density is diluted under modified ATC.

Figure 6 below shows graphically how modified ATC double counts variable costs and dilutes the impact of fixed costs – where economies of density are exhibited – in the revenue-allocation procedure.

Figure 6: STB Modified ATC Formulation Significantly Over-Weights Variable Costs

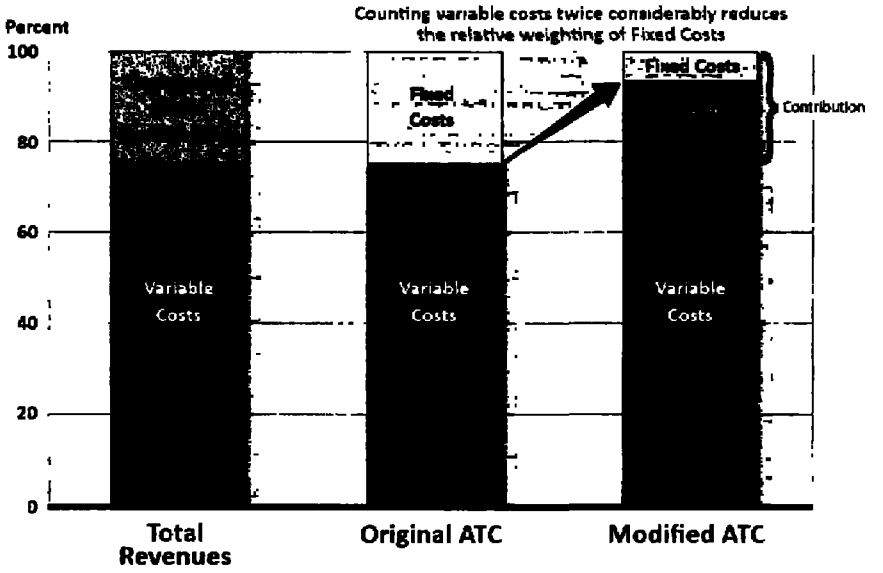
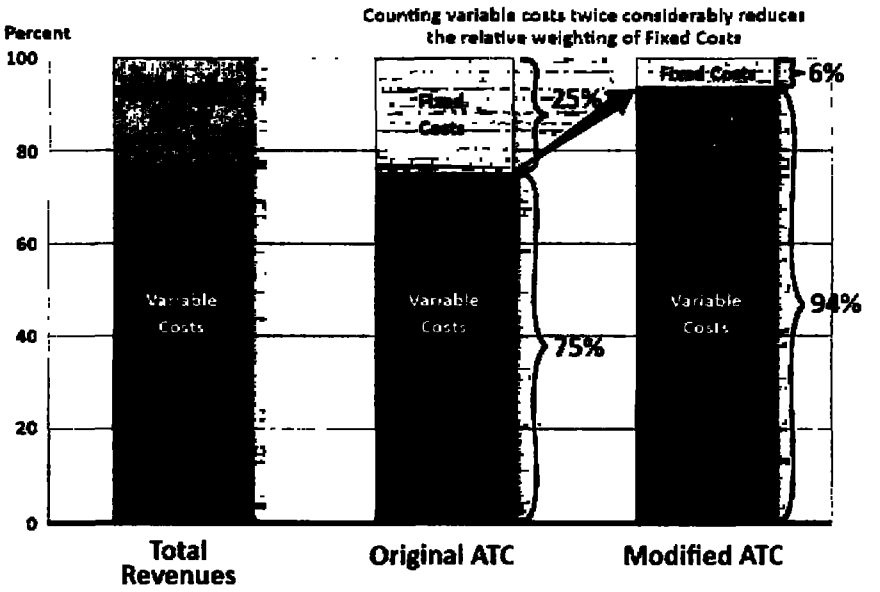


Figure 6 depicts an average movement that generates revenue sufficient to cover total cost. On average, BNSF's costs are determined by URCS to be 75% variable and 25% fixed. Figure 6 depicts a movement with that 75/25 split; and ATC would maintain that 75/25 relationship in allocating revenues. Variable costs would be given 75% weighting and fixed costs, which reflect economies of density, would be given a 25% weighting. Original ATC ensured that economies of density would be adequately reflected in the revenue allocation. Prior revenue-allocation approaches, which were largely mileage-based, allocated revenues based on variable costs, resulting in an effective weighting of 100% variable / 0% fixed. Prior revenue-allocation methodologies therefore ignored economies of density. As seen in Figure 6, modified ATC represents a giant step backwards toward a revenue allocation based almost entirely on variable costs.

The extent to which variable costs are over-weighted, and the impact of economies of density diluted, can be seen in the example depicted in Figure 6. For that movement, the first step of

modified ATC would allocate revenues to equal the variable costs. Thus, 75% of the revenues would reflect variable costs only. The contribution, in this case the remaining 25% of revenues, would be split on the relationship of variable costs to fixed costs based on the original ATC formulation, i.e., on the basis of 75% variable / 25% fixed. In this example, variable costs are the basis of the first 75% of revenues allocated, and 75% of the remaining 25%, or 94% of the total.[7] Fixed costs represent none of the weighting of the first 75% of the revenues, and only 25% of the remaining 25%, for an overall representation of only 6%.[8] Thus, rather than reflecting the 75/25 weighting of total costs as would be the case under original ATC, revenues allocated by modified ATC incorporate a 94/6 weighting in which fixed costs receive *only one-fourth* their actual share of the total costs. See Figure 7 below.

Figure 7: STB Modified ATC Formulation Significantly Dilutes Fixed Costs



[7] 0.75*1.00 + 0.25*0.75 = 0.9375
[8] 0 + 0.25*0.25 = 0.0625

The example discussed above depicts a movement that exhibits the system-average split between variable and fixed costs. The relative mix of variable and fixed costs for each individual movement will fluctuate based on the relative densities of the segments traversed. But modified ATC dilutes the impact of economies of density on all movements, regardless of the actual split between variable and fixed costs on an individual movement. The following table shows that modified ATC substantially understates the weight given to fixed costs on movements with different variable-to-fixed cost relationships, for movements with revenues equal to total costs. The percentages represent the weight given to fixed costs under the original and modified ATC formulations.

Table 1: Fixed Cost Weighting at Different Variable/Fixed Splits

	Variable/Fixed Cost Split		
	80/20	75/25	60/40
Original ATC	20%	25%	40%
Modified ATC	4%	6%	16%

In addition, modified ATC understates the weight given to fixed costs on movements generating different levels of contribution. The following table depicts the weightings given to fixed costs for movements with a variable/fixed cost split of 75/25 that are generating revenues equal to 75% of total costs, 100% of total costs, and 125% of total costs.

Table 2: Fixed Cost Weighting at Different Revenue Levels

	Revenue=75% of Total Costs	Revenue= Total Costs	Revenue=125% of Total Costs
Original ATC	25%	25%	25%
Modified ATC	0%	6%	13%

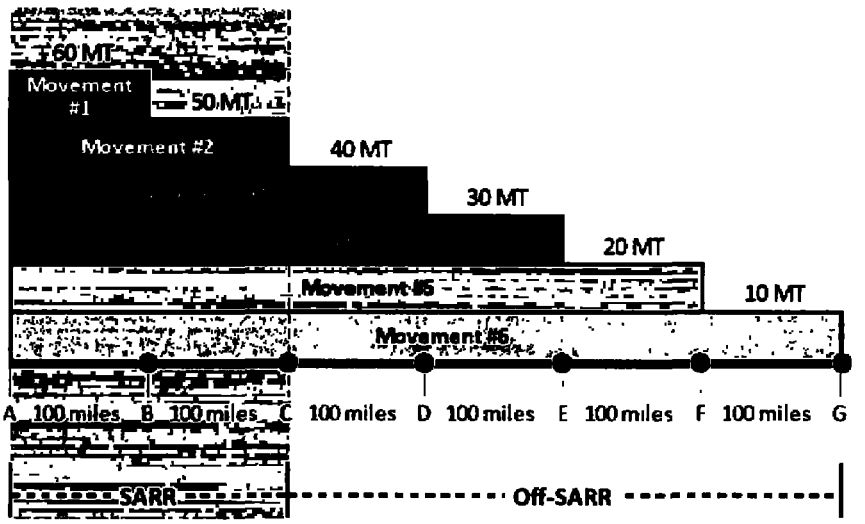
While ATC reflects the actual share of fixed costs for each combination of cost and revenue assumptions, modified ATC consistently understates the fixed-cost share, often by a significant amount. Exhibit 4 shows that under modified ATC, the LRR received a substantial over-allocation of revenues relative to its share of total costs on virtually all movements.

By overemphasizing variable costs in the allocation of revenue, the modified ATC formulation suppresses the density-related component that ATC was constructed to reflect. Application of modified ATC therefore reintroduces the bias in favor of high-density SARR segments that the complainant chose to replicate, while leaving insufficient revenues for the lower-density segments on the residual incumbent. Modified ATC therefore undermines the Board's objective in adopting ATC. Under modified ATC, complainants have an improper incentive to use cross-over traffic on high-density SARRs because modified ATC produces SAC results that are biased in favor of such SAC presentations.

We developed an example to show how modified ATC consistently over-allocates revenue to cross-over movements on high-density SARRs and produces a bias in favor of high-density SARRs. To demonstrate this bias. we develop ATC and modified ATC calculations for a simplified system, which is depicted graphically below in Figure 8. The system is comprised of six segments, each 100 miles in length. The system handles six different movements, each of which is assumed to have 10 million tons, and to originate from the same location, one of the system's end-points (point "A"). One of the movements terminates each 100 miles: Movement #1 travels the 100 miles from A to B, Movement #2 traverses segments A-B and B-C for a total of 200 miles; Movement #3 travels 300 miles to its termination at point D, etc. As a result, the density for the six segments is 60, 50, 40, 30, 20 and 10 million tons, respectively, as shown on Figure 8. Variable costs are assumed to be a constant $0.01 per ton-mile across the movements.

which totals S210 million for this system. Fixed costs are assumed to be S75 million for the system, which is then spread over the segments as a constant S125,000 per mile.

Figure 8: Hypothetical Network Example



The first two segments A-B and B-C are assumed to be built by a SARR entrant, and the remaining four segments, from point C through G, are left to remain with the residual incumbent. We calculated revenue allocation for cross-over movements #3 through 6[9] under the STB's original ATC and modified ATC formulations. The following table shows that original ATC assigns revenues to the SARR and to the residual incumbent in a manner that reflects the corresponding share of average total costs, maintaining the same revenue-to-cost ratio for the on-SARR and off-SARR portions. Modified ATC, however, consistently allocates to the SARR revenues that exceed its proportionate share of total costs. By over-weighting the movement's variable costs in the allocation formula, modified ATC consistently assigns more revenue to the

[9] As neither Movements #1 nor #2 travel past the location of the hypothetical interchange between the SARR and the residual incumbent (point C), each is local to the SARR and requires no revenue allocation.

higher-density, on-SARR portion, and fails to address the proportionately higher fixed costs per unit on the lower-density off-SARR segments. In order to assess the impact at different revenue levels, we calculate the original and modified ATC allocations for revenue levels for each movement at 25 percent below total cost, equal to total cost, and 25 percent above total cost.

Table 3: Modified ATC Consistently Over-Allocates Revenues to the SARR

Revenues = 75% of Total Costs				
	SARR Portion of Total Costs	Original ATC Revenue %	Modified ATC Revenue %	Over-allocation of SARR Revenue 1/
Move #3 (A-D)	65%	65%	67%	2%
Move #4 (A-E)	47%	47%	50%	6%
Move #5 (A-F)	36%	36%	40%	11%
Move #6 (A-G)	27%	27%	33%	20%
Revenues = Total Costs				
	SARR Portion of Total Costs	Original ATC Revenue %	Modified ATC Revenue %	Over-allocation of SARR Revenue 1/
Move #3 (A-D)	65%	65%	66%	2%
Move #4 (A-E)	47%	47%	49%	4%
Move #5 (A-F)	36%	36%	39%	8%
Move #6 (A-G)	27%	27%	31%	15%
Revenues = 125% of Total Costs				
	SARR Portion of Total Costs	Original ATC Revenue %	Modified ATC Revenue %	Over-allocation of SARR Revenue 1/
Move #3 (A-D)	65%	65%	66%	1%
Move #4 (A-E)	47%	47%	49%	3%
Move #5 (A-F)	36%	36%	38%	6%
Move #6 (A-G)	27%	27%	30%	12%

1/ (Modified ATC % - ATC %) / ATC %

In addition to the above showings that the SARR is allocated disproportionately more revenue for each individual movement, the totals across movements demonstrate that modified ATC allocates greater revenues to the higher-density SARR segments than the total costs of the

segments, and fewer revenues to the off-SARR segments. The following table summarizes the total revenues that are allocated, across movements to the on-SARR and off-SARR segments in aggregate, for the scenario under which revenues are assumed to equal total costs. The table also shows that the consistent bias to over-allocating revenues to higher-density segments does not exist for revenues that are allocated by the Board's original ATC formulation, which reflect the relative share of total costs.

Table 4: Modified ATC Does Not Maintain the Relative Total Costs of SARR and Off-SARR Segments

$ in Millions	SARR Segments	Off-SARR Segments	System Total
Total Costs	$135	$150	$285
Original ATC Revenues	$135	$150	$285
Modified ATC Revenues	$142	$143	$285

These examples clearly demonstrate the distorting effect of modified ATC. Not only does modified ATC allocate to the SARR revenues that exceed its share of total costs, modified ATC also encourages complainants to replicate only the high-density portions of a network because, by doing so they receive a higher percentage of allocated revenues. As the tables above show, the over-allocation of revenue in proportion to total cost increases as a movement covers more distance on lower-density, off-SARR lines. For example, for Movement #3, for which two-thirds of the movement is on-SARR, the over-allocation of revenue to the SARR is 2% (in the revenue equals total cost scenario), but for Movement #6, where two-thirds of the movement is off-SARR, the SARR over-allocation is 15%. For Movement #3, the average density of the on-SARR and off-SARR lines is relatively close. But for Movement #6, the average density of the off-SARR lines is substantially lower than the average on-SARR density. Thus, modified ATC produces the greatest distortions where the density differences between the on-SARR and off-

SARR segments of a movement are largest. This effect is directly traceable to the overweighting of variable costs embodied in modified ATC and the resulting under-recognition of economies of density.[10]

IV. The Bias Produced by Modified ATC Is Directly Reflected In The Issue-Traffic Rate Prescription

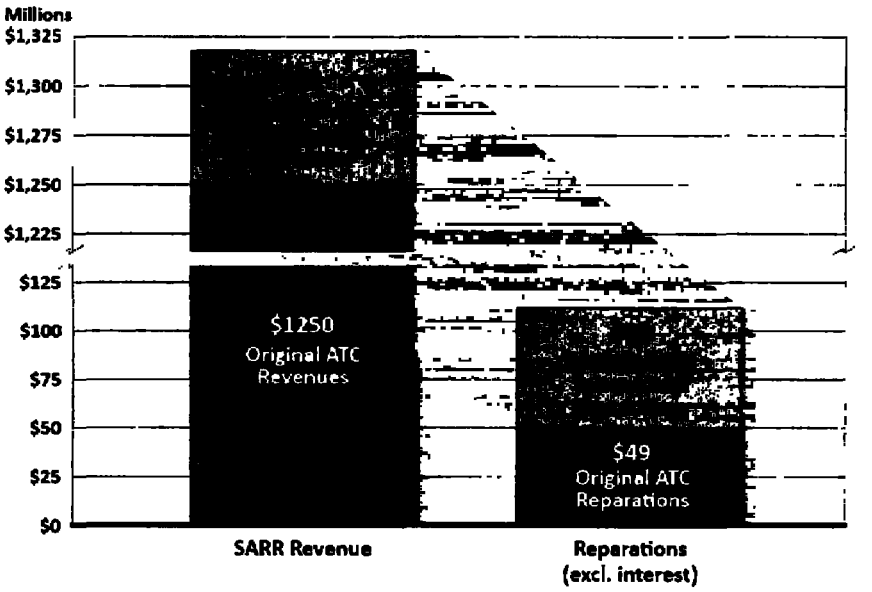
The revenue-allocation assumptions for cross-over traffic can have profound effects on stand-alone cost outcomes and the extent of a rate prescription available under the Board's MMM methodology. MMM computes the maximum allowable R/VC for the SARR traffic group at the level at which SARR revenues equal SARR costs for each year. The formula then reduces the R/VC's for higher-rated shipments in the SARR traffic group with R/VCs above the maximum down to the maximum R/VC level. As discussed previously, the Board's concern that original ATC allocated revenues below variable costs was directed at lower-rated cross-over movements with through R/VC ratios close to 100%. After application of modified ATC, this traffic is still among the lowest-rated in the LRR traffic group and is thus insulated from any MMM rate reduction. This leaves the increased SARR revenue overage produced by modified ATC to be absorbed by the LRR higher-rated traffic, which in this case is predominately the WFA/Basin issue traffic.

Figure 9 below demonstrates that in this case virtually all of the incremental revenues from cross-over traffic added to the SARR by the modified ATC formulation flows through the MMM calculation process to lower the issue-traffic prescribed rate and increase reparations. Modified ATC increases SARR revenues from cross-over traffic by $68 million for the period from the Fourth Quarter 2004 through 2009, and increases the reparations that BNSF was directed to pay

[10] BNSF workpaper "ATC 6-Segment Example.xlsx" shows the weighting of variable cost in the revenue allocation for each move. The overweighting is comparable in magnitude to the variable cost/fixed cost examples shown above.

by $63 million, before interest. The distortions produced by modified ATC contributed significantly to producing what the Board described as the largest rate reduction and reparations order in the history of the agency.

Figure 9: Effects of Modified ATC on Rate Prescription, 4Q 2004 through 2009



V. If the Board Continues to Believe that Original ATC Improperly Allocates Revenue for Some Low-Rated Traffic, an Option Better Tailored to Address the Identified Problem Exists

As explained above, the gap between variable costs and the revenue assigned to the SARR by the original ATC formula for those moves in the 2005 SARR traffic group with revenue below variable cost is approximately $591,000. But as discussed above, the Board's modified ATC formulation does more than eliminate the shortfall. It allocates to the LRR an additional $2.1 million on the movements that created the shortfall and adds another $9.4 million from movements in the 2005 traffic group for which original ATC already allocated revenues above corresponding variable costs.

If the Board was concerned about the revenue shortfall on the handful of movements that did not receive revenues sufficient to cover BNSF's URCS variable costs on the SARR portion, a more reasonable approach would have been to make a modest adjustment to ATC to address the amount of the shortfall. The alternative approach is straightforward. Movements with through R/VCs greater than one would be allocated revenue under original ATC. Any movements with SARR allocated revenues below URCS costs for on-SARR segments, would have revenues increased to equal the variable costs.[11] Movements with through revenue R/VCs less than or equal to one would be allocated based on the relative variable cost; that is, the R/VC ratio for the on-SARR and off-SARR portions would be the same.[12] This would address the Board's concern, without distorting the relative total-cost allocation for other movements that do not contribute to the concern. And it would do so in the same number of steps (two) that the Board's modified ATC formulation requires. The results of implementing this alternative versus original and modified ATC over the period 4Q2004-2009 are set forth in the following table.[13]

Table 5: Reparations, 4Q 2004 - 2009

$ in Millions	Original ATC	Modified ATC	Alternative
Reparations (excluding interest)	$49	$112	$53

[11] Under this approach, the revenues remaining for the defendant's segments not replicated by the SARR would be reduced by the corresponding amount.
[12] STB September 2007 *WFA/Basin* decision at 14, fn 18
[13] BNSF workpapers "WFA Reparations-Revised OATC.xlsx" and "WFA Reparations-Revised Alt ATC.xlsx" BNSF includes with this filing a full set of SARR revenue, DCF, and MMM calculations underlying the reparations results, for the original ATC and alternative approaches. The starting point for these was the STB's workpapers underlying the June 2009 decision.

I declare under penalty of perjury that the foregoing is true and correct. I further certify that I am qualified and authorized to sponsor and file this testimony.

Executed on November 19, 2010

Michael Baranowski

I declare under penalty of perjury that the foregoing is true and correct. I further certify that I am qualified and authorized to sponsor and file this testimony.

Executed on November 19, 2010

Benton V. Fisher

Michael R. Baranowski

Senior Managing Director - Economic Consulting

mike.baranowski@fticonsulting.com

1101 K Street, NW
Suite B100
Washington DC 20005
Tel (202) 312 9100
Fax (202) 312-9101

Education
B.S. in Accounting, Fairfield University

Supplemental Finance Studies, Kean College

Mike Baranowski provides financial and economic consulting services to the telecommunications and transportation industries. He has special expertise in analyzing and developing complex computer costing models, operations analysis, and transportation engineering. Much of his work involves providing oral and written expert testimony before courts and regulatory bodies.

Some of Mr. Baranowski's representative accomplishments include:

- Overseeing the development of computer cost modeling tools designed to simulate the cost of competive entry into local telecommunications markets and directing the efforts of a nationwide team of testifying experts presenting the cost model results in multiple proceedings across the country.
- Directing the analysis, critique and restatement of a variety of complex cost models developed by major telecommunications companies designed to simulate the forward-looking cost of competitive entry into local telecommunications markets.
- Designing multiple PC-based spreadsheet models for use in calculating the stand-alone cost of competitive entry into the railroad and pipeline markets These models have been used to assist clients in all three network industries in making internal pricing decisions that are in compliance with governing regulatory standards.
- Conducting detailed analyses of railroad operations and developing the associated capital requirements and operating expenses attributable to specific movements and the incremental capital and operating expense requirements attributable to major changes in anticipated traffic levels.
- Calculating marginal and incremental costs for a major petroleum products pipeline company, an approach that is now used regularly by the company in making internal day-to-day pricing decisions.

Mr. Baranowski holds a B.S. in Accounting from Fairfield University in Fairfield, Connecticut and has pursued supplemental finance studies at Kean College in Union, New Jersey.

TELECOMMUNICATIONS TESTIMONY

Federal Communications Commission

February 1998	File No. E-98-05. AT&T Corp. v. Bell Atlantic Corp. Affidavit of Michael R. Baranowski.
March 13, 1998	File No. E-98-05. AT&T Corp. v. Bell Atlantic Corp. Supplemental Affidavit of Michael R. Baranowski.
June 10, 1999	CC Docket No. 96-98. Implementation of the Local Competition Provisions of the Telecommunications Act of 1996. Reply Affidavit of Michael R. Baranowski, John C. Klick and Brian F. Pitkin.

July 25. 2001	CC Docket No 00-251, 00-218. In the Matter of Petition of AT&T Communications of Virginia, Inc. and WorldCom, Inc., Pursuant to Section 252(e)(5) of the Communications Act, for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon-Virginia, Inc. Panel
June 13, 2005	WC Docket No. 05-25;RM-10593. In the Matter of Special Access Rates for Price Cap Local Exchange Carriers; AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services, Joint Declaration on Behalf of SBC Communications, Inc.
July 29, 2005	WC Docket No. 05-25;RM-10593. In the Matter of Special Access Rates for Price Cap Local Exchange Carriers; AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services, Joint Reply Declaration on Behalf of SBC Communications, Inc.

Public Service Commission of Delaware

February 4, 1997	PSC Docket No. 96-324. In the Matter of Bell Atlantic - Delaware Statement of Terms and Conditions Under Section 252(F) of the Telecommunications Act of 1996. Testimony of Michael R. Baranowski.

Public Service Commission of the District of Columbia

March 24, 1997	Formal Case No. 962. In the Matter of the Implementation of the District of Columbia Telecommunications Competition Act of 1996. Testimony of Michael R. Baranowski.
May 2, 1997	Formal Case No. 962. In the Matter of the Implementation of the District of Columbia Telecommunications Competition Act of 1996. Rebuttal Testimony of Michael R. Baranowski.

Public Service Commission of the State of Maryland

March 7, 1997	Docket No. 8731, Phase II. In the Matter of the Petitions for Approval of Agreements and Arbitration of Unresolved Issues Arising Under Section 252 of the Telecommunications Act of 1996. Direct Testimony of Michael R Baranowski.
April 4, 1997	Docket No. 8731, Phase II. In the Matter of the Petitions for Approval of Agreements and Arbitration of Unresolved Issues Arising Under Section 252 of the Telecommunications Act of 1996. Rebuttal Testimony of Michael R. Baranowski.
May 25, 2001	Case No. 8879 In the Matter of the Investigation into Rates for Unbundled Network Elements Pursuant to the Telecommunications Act of 1996. Panel Testimony on Recurring Cost Issues

Public Service Commission of the State of Michigan

January 20, 2004	Case No. U-13531. In the Matter, on the Commission's Own Motion to Review the Costs of Telecommunication Service Provided By SBC Michigan. Initial Testimony of Michael R Baranowski and Julie A. Murphy.
May 10, 2004	Case No. U-13531. In the Matter, on the Commission's Own Motion to Review the Costs of Telecommunication Service Provided By SBC Michigan. Final Reply Testimony of Michael R. Baranowski and Julie A. Murphy.

New Jersey Board of Public Utilities

December 20, 1996	Docket No. TX 95120631. Notice of Investigation Local Exchange Competition for Telecommunications Services. Rebuttal Testimony of John C. Klick and Michael R. Baranowski.

North Carolina Utilities Commission

March 9, 1998	Docket No. P-100, Sub 133d. In the Matter of Establishment of Universal Support Mechanisms Pursuant to Section 254 of the Telecommunications Act of 1996. Rebuttal Testimony of Michael R. Baranowski.

Pennsylvania Public Utility Commission

January 13, 1997	Docket Nos. A-310203F0002 et al MFS-III. Application of MFS Intelenet of Pennsylvania, Inc. et. Al. (Phase III). Rebuttal Testimony of Michael R. Baranowski.
February 21, 1997	Docket Nos. A-310203F0002 et al. MFS-III Application of MFS Intelenet of Pennsylvania, Inc. et. Al. (Phase III). Surrebuttal Testimony of Michael R Baranowski
April 22, 1999	Docket Nos. P-00991648, P-00991649. Petition of Senators and CLECs for Adoption of Partial Settlement and Joint Petition for Global Resolution of Telecommunications Proceedings. Direct Testimony of Michael R. Baranowski.
January 11, 2002	Docket No. R-00016683. Generic Investigation of Verizon Pennsylvania, Inc.'s Unbundled Network Element Rates. Panel Testimony on Recurring Cost Issues

State Corporation Commission Commonwealth of Virginia

April 7, 1997	Case No. PUC970005 Ex Parte to Determine Prices Bell Atlantic - Virginia, Inc. Is Authorized To Charge Competing Local Exchange Carriers In Accordance With The Telecommunications Act of 1996 And Applicable State Law. Affidavit of Michael R. Baranowski.
April 23, 1997	Case No. PUC970005. Ex Parte to Determine Prices Bell Atlantic - Virginia, Inc. Is Authorized To Charge Competing Local Exchange Carriers In Accordance With The Telecommunications Act of 1996 And Applicable State Law. Direct Testimony of Michael R. Baranowski

June 10, 1997	Case No. PUC970005 Ex Parte to Determine Prices Bell Atlantic - Virginia, Inc. Is Authorized To Charge Competing Local Exchange Carriers In Accordance With The Telecommunications Act of 1996 And Applicable State Law. Rebuttal Testimony of Michael R. Baranowski.

Washington State Utilities and Transportation Commission

December 22, 2003	Docket No. UT-033044. In the Matter of the Petition of Qwest Corporation To Initiate a Mass-Market Switching and Dedicated Transport Case Pursuant to the Triennial Review Order. Direct Testimony of Michael R. Baranowski.
February 2, 2004	Docket No. UT-033044. In the Matter of the Petition of Qwest Corporation To Initiate a Mass-Market Switching and Dedicated Transport Case Pursuant to the Triennial Review Order. Response Testimony of Michael R. Baranowski.

Public Service Commission of West Virginia

February 13, 1997	Case Nos. 96-1516-T-PC, 96-1561-T-PC, 96-1009-T-PC, 96-1533-T-T. Petition to establish a proceeding to review the Statement of Generally Available Terms and Conditions offered by Bell Atlantic in accordance with Sections 251, 252, and 271 of the Telecommunications Act of 1996. Testimony of Michael R. Baranowski.
February 27, 1997	Case Nos. 96-1516-T-PC, 96-1561-T-PC, 96-1009-T-PC, 96-1533-T-T. Petition to establish a proceeding to review the Statement of Generally Available Terms and Conditions offered by Bell Atlantic in accordance with Sections 251, 252, and 271 of the Telecommunications Act of 1996. Rebuttal Testimony of Michael R. Baranowski.
June 3, 2002	Case No. 01-1696-T-PC, Verizon West Virginia, Inc. Petition For Declaratory Ruling That Pricing of Certain Additional Unbundled Network Elements (UNEs) Complies With Total Element Long-Run Incremental Cost (TELRIC) Principles. Direct Testimony of Michael R. Baranowski
July 1, 2002	Case No. 01-1696-T-PC, Verizon West Virginia, Inc. Petition For Declaratory Ruling That Pricing of Certain Additional Unbundled Network Elements (UNEs) Complies With Total Element Long-Run Incremental Cost (TELRIC) Principles. Supplemental Direct Testimony of Michael R. Baranowski

RAILROAD TESTIMONY

Interstate Commerce Commission

March 9, 1995	Finance Docket No. 32467. National Railroad Passenger Corporation and Consolidated Rail Corporation -- Application Under Section 402(a) of the Rail Passenger Service Act for an Order Fixing Just Compensation
October 30, 1995	Docket No. 41185. Arizona Public Service Company and Pacificorp v. The Atchison, Topeka and Santa Fe Railway Company.

Surface Transportation Board

July 11, 1997	Docket No. 41989. Potomac Electric Power Company v. CSX Transportation, Inc. Reply Statement and Evidence of Defendant CSX Transportation, Inc.
August 14, 2000	Docket No. 42051. Wisconsin Power and Light Company v. Union Pacific Railroad Company, Reply Verified Statement of Christopher D. Kent and Michael R. Baranowski.
September 20, 2002	STB Docket No. 42070. Duke Energy Corporation v. CSX Transportation, Inc., Reply Evidence and Argument of CSX Transportation, Inc.
September 30, 2002	STB Docket No. 42069 Duke Energy Corporation v. Norfolk Southern Railway Company, Reply Evidence and Argument of Norfolk Southern Railway Company.
October 11, 2002	STB Docket No. 42072. Carolina Power & Light v. Norfolk Southern Railway Company, Reply Evidence and Argument of Norfolk Southern Railway Company.
November 12, 2002	Docket No. 42070 Duke Energy Corporation v. CSX Transportation, Rebuttal Evidence and Argument of CSX Transportation
November 19, 2002	Docket No. 42069 Duke Energy Corporation v. Norfolk Southern Railway Company, Rebuttal Evidence and Argument of Norfolk Southern Railway Company
November 27, 2002	Docket No. 42072 Carolina Power & Light Company v. Norfolk Southern Railway Company, Rebuttal Evidence and Argument of Norfolk Southern Railway Company
January 10, 2003	STB Docket No. 41185. Arizona Public Service Co. And Pacificorp v. The Atchison, Topeka and Santa Fe Railway Company, Petition of the Burlington Northern and Santa Fe Railway Company to Reopen and Vacate Rate Prescription.
February 19, 2003	STB Docket No. 42077, Arizona Public Service Co. And Pacificorp v The Burlington Northern and Santa Fe Railway Company, and STB Docket No. 41185, Arizona Public Service Co. And Pacificorp v. The Burlington Northern and Santa Fe Railway Company, Reply of the Burlington Northern Santa Fe Railway Company in Opposition to Petition for Consolidation.
April 4, 2003	Docket No. 42057 Public Service Company of Colorado D/B/A Xcel Energy v. The Burlington Northern and Santa Fe Railway Company, Reply Evidence and Argument of The Burlington Northern and Santa Fe Railway Company
October 8. 2003	Docket No. 42071 Otter Tail Power Company v. The Burlington Northern and Santa Fe Railway Company, Reply Evidence of The Burlington Northern and Santa Fe Railway Company
October 24, 2003	Docket No. 42069 Duke Energy Corporation v. Norfolk Southern Railway Company, Supplemental Evidence of Norfolk Southern Railway Company

October 31, 2003	Docket No. 42069 Duke Energy Corporation v. Norfolk Southern Railway Company, Reply of Norfolk Southern Railway Company to Duke Energy Company's Supplemental Evidence
November 24, 2003	Docket No. 42072 Carolina Power & Light Company v. Norfolk Southern Railway Company, Supplemental Evidence of Norfolk Southern Railway Company
December 2, 2003	Docket No 42072 Carolina Power & Light Company v. Norfolk Southern Railway Company, Reply of Norfolk Southern Railway Company to Carolina Power & Light Company's Supplemental Evidence
December 12. 2003	Docket No. 42069 Reply of Norfolk Southern Railway Company to Duke Energy Corporation's Petition to Correct Technical Error and Affidavit of Michael R. Baranowski
January 5, 2004	Docket No. 42070 Duke Energy Corporation v. CSX Transportation, Inc., Supplemental Evidence of CSX Transportation, Inc.
January 26, 2004	Docket No. 42058 Arizona Electric Power Cooperative, Inc. v. The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad Company, Joint Supplemental Reply Evidence and Argument of The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad Company
March 22, 2004	Docket No. 42071 Otter Tail Power Company v. The Burlington Northern and Santa Fe Railway Company, Supplemental Reply Evidence of The Burlington Northern and Santa Fe Railway Company
April 9, 2004	Docket No. 41185 Arizona Public Service Company and Pacificorp v. The Burlington Northern and Santa Fe Railway Company, The Burlington Northern and Santa Fe Railway Company's Reply Evidence on Reopening
May 24, 2004	Docket No 41191 (Sub-No. 1) AEP Texas North Company v. The Burlington Northern and Santa Fe Railway Company, Reply Evidence of The Burlington Northern and Santa Fe Railway Company
June 23, 2004	Docket No. 42057 Public Service Company of Colorado d/b/a Xcel Energy v. The Burlington Northern and Santa Fe Railway Company, Petition to Correct Technical and Computational Errors
March 1, 2005	Docket No. 42071 Otter Tail Power Company v BNSF Railway Company, Supplemental Evidence of BNSF Railway Company
April 4, 2005	Docket No. 42071 Otter Tail Power Company v BNSF Railway Company, Reply of BNSF Railway Company to Supplemental Evidence
July 20, 2005	Docket No. 42088 Western Fuels Association, Inc. and Basin Electric Power Cooperative, Inc. v. BNSF Railway Company, Reply Evidence of BNSF Railway Company
May 1, 2006	Docket No. Ex Parte 657 (Sub-No. 1) Major Issues in Rail Rate Cases, Verified Statement Supporting Comments of BNSF Railway Company

May 31, 2006	Ex Parte 657 (Sub-No. 1) Major Issues in Rail Rate Cases; Verified Statement Supporting Reply Comments of BNSF Railway Company
June 15, 2006	Docket No. 42088 Western Fuels Association, Inc. and Basin Electric Power Cooperative, Inc. v. BNSF Railway Company, Reply Supplemental Evidence of BNSF Railway Company
June 15, 2006	Docket No. 41191 (Sub 1) AEP Texas North Company v. BNSF Railway Company, Reply Supplemental Evidence of BNSF Railway Company
June 30, 2006	Docket No. Ex Parte 657 (Sub-No. 1) Major Issues in Rail Rate Cases; Verified Statement Supporting Rebuttal Comments of BNSF Railway Company
February 4, 2008	Docket No. 42099 E.I. DuPont De Nemours and Company v. CSX Transportation, Inc., Opening Evidence of CSX Transportation, Inc.
February 4, 2008	Docket No. 42100 E.I. DuPont De Nemours and Company v. CSX Transportation, Inc., Opening Evidence of CSX Transportation, Inc.
February 4, 2008	Docket No. 42101 E.I. DuPont De Nemours and Company v. CSX Transportation, Inc., Opening Evidence of CSX Transportation, Inc.
May 1, 2008	Docket No. Ex Parte 679 Petition of the AAR to Institute a Rulemaking Proceeding to Adopt a Replacement Cost Methodology to Determine Railroad Revenue Adequacy, Verified Statement of Michael R. Baranowski
July 14, 2008	Docket No. 42088 Western Fuels Association, Inc. and Basin Electric Power Cooperative, Inc. v. BNSF Railway Company, Third Supplemental Reply Evidence of BNSF Railway Company
July 14, 2008	Docket No. AB-515 (Sub-No. 2) Central Oregon & Pacific Railroad, Inc. -- Abandonment and Discontinuance of Service -- in Coos, Douglas, and Lane Counties, Oregon (Coos Bay Rail Line)
August 8, 2008	Docket No. 41191 (Sub-No. 1) AEP Texas North Company v BNSF Railway Company, Fourth Supplemental Evidence of BNSF Railway Company
August 11, 2008	Docket No. 42014 Entergy Arkansas, Inc. and Entergy Services, Inc. v Union Pacific Railroad Company and Missouri & Northern Arkansas Railroad Company, Inc.; Finance Docket No 32187 Missouri & Northern Arkansas Railroad Company, Inc. – Lease, Acquisition and Operations Exemption – Missouri Pacific Railroad Company and Burlington Northern Railroad Company, Reply Evidence and Argument of Union Pacific
September 5, 2008	Docket No. 41191 (Sub-No. 1) AEP Texas North Company v. BNSF Railway Company, Fourth Supplemental Reply Evidence of BNSF Railway Company
September 12, 2008	Docket No. AB-515 (Sub-No. 2) Central Oregon & Pacific Railroad, Inc. -- Abandonment and Discontinuance of Service -- in Coos, Douglas, and Lane Counties, Oregon (Coos Bay Rail Line); Rebuttal to Protests
August 24, 2009	Docket No. 42114 US Magnesium, L.L.C. v. Union Pacific Railroad Company, Opening Evidence of Union Pacific Railroad Company
October 22, 2009	Docket No. 42114 US Magnesium, L.L.C. v. Union Pacific Railroad Company, Rebuttal Evidence of Union Pacific Railroad Company

January 19, 2010	Docket No. 42110 Seminole Electric Cooperative, Inc. v. CSX Transportation, Inc., Reply Evidence of CSX Transportation, Inc.
May 7, 2010	Docket No. 42113 Arizona Electric Power Cooperative, Inc. v. BNSF Railway Company and Union Pacific Railroad Company, Joint Reply Evidence of BNSF Railway Company and Union Pacific Railroad Company

US District Court for Northern District of Oklahoma

January 2, 2007	Case No. 06-CV-33 TCK-SAJ, Grand River Dam Authority v. BNSF Railway Company; Report of Michael R. Baranowski
February 2. 2007	Case No 06-CV-33 TCK-SAJ, Grand River Dam Authority v. BNSF Railway Company; Reply Report of Michael R. Baranowski

Circuit Court of Pulaski County, Arkansas

August 17, 2007	Case No. CV 2006-2711, Union Pacific Railroad v. Entergy Arkansas, Inc. and Entergy Services, Inc., Expert Witness Report of Michael R. Baranowski
December 14, 2007	Case No. CV 2006-2711, Union Pacific Railroad v. Entergy Arkansas, Inc. and Entergy Services, Inc., Reply Expert Witness Report of Michael R. Baranowski

U.S. District Court for the Eastern District of Wisconsin

February 15, 2008	Case No. 06-C-0515, Wisconsin Electric Power Company v. Union Pacific Railroad Company, Expert Reply Report of Michael R. Baranowski

Arbitrations and Mediations

March 7, 2005	Arbitration Case #181 Y 00490 04 BNSF Railway Company and J.B. Hunt Transport, Inc., Expert Report on behalf of BNSF Railway Company
March 28, 2005	Arbitration Case #181 Y 00490 04 BNSF Railway Company and J.B. Hunt Transport, Inc., Rebuttal Expert Report on behalf of BNSF Railway Company
April 12, 2005	Arbitration Case #181 Y 00490 04 BNSF Railway Company and J.B. Hunt Transport, Inc., Supplemental Expert Report on behalf of BNSF Railway Company
April 19, 2005	Arbitration Case #181 Y 00490 04 BNSF Railway Company and J.B. Hunt Transport, Inc., Supplemental Rebuttal Expert Report on behalf of BNSF Railway Company
April/May 2005	Arbitration Case #181 Y 00490 04 BNSF Railway Company and J.B. Hunt Transport, Inc , Hearings before Arbitration Panel
February 20, 2007	In the Matter of the Arbitration between the Detroit Edison Company, et al, and BNSF Railway Company, Expert Report of Michael R. Baranowski
March 19, 2007	In the Matter of the Arbitration between the Detroit Edison Company, et al, and BNSF Railway Company, Supplemental Expert Report of Michael R. Baranowski

February 12, 2009	In the Matter of the Arbitration between Wisconsin Public Service Corporation and Union Pacific Railroad Company, Rebuttal Expert Report of Michael R. Baranowski
October 16, 2009	In the Matter of Arbitration Between Norfolk Southern Railway Company and Drummond Coal Sales, Inc., Expert Report of Michael R. Baranowski

Benton V. Fisher

Senior Managing Director - Economic Consulting

benton.fisher@fticonsulting.com

1101 K Street NW
Suite B100
Washington DC 20005
Tel (202) 312-9100
Fax (202) 312-9101

Education
B.S. in Engineering and Management Systems, Princeton University

Benton V. Fisher is a Senior Managing Director of FTI's Economic Consulting group, located in Washington, D.C. Mr. Fisher has nearly 20 years of experience in providing financial, economic and analytical consulting services to corporate clients dealing with transportation, telecommunications, and postal subjects.

North America's largest railroads have retained FTI both to assist them in making strategic and tactical decisions and to provide expert testimony in litigation. FTI's ability to present a thorough understanding of myriad competitive and regulatory factors has given its clients the necessary tools to implement and advance their business. Mr. Fisher has worked extensively to develop these clients' applications for mergers and acquisitions and expert testimony justifying the reasonableness of their rates before the Surface Transportation Board. In addition to analyzing extensive financial and operating data, Mr. Fisher has worked closely with people within many departments at the railroad as well as outside counsel to ensure that the railroads' presentations are accurate and defensible. Additionally, Mr. Fisher reviews the expert testimony of the railroads' opponents in these proceedings, and advises counsel on the necessary course of action to respond.

AT&T and MCI retained FTI to advance its efforts to implement the Telecommunications Act of 1996 in local exchange markets. Mr. Fisher was primarily responsible for reviewing the incumbent local exchange carriers' (ILEC) cost studies, which significantly impacted the ability of FTI's clients to access local markets. Mr. Fisher analyzed the sensitivity of multiple economic components and incorporated this information into various models being relied upon by the parties and regulators to determine the pricing of services. Mr. Fisher was also responsible for preparing testimony that critiqued alternative presentations.

Mr. Fisher assisted in reviewing the U.S. Postal Service's evidence and preparing expert testimony on behalf of interveners in Postal Rate and Fee Changes cases. He has also been retained by a large international consulting firm to provide statistical and econometric support in their preparation of a long-range implementation plan for improving telecommunications infrastructure in a European country.

Mr. Fisher has sponsored expert testimony in rate reasonableness proceedings before the Surface Transportation Board and in contract disputes in Federal Court and arbitration proceedings.

Mr. Fisher holds a B.S. in Engineering and Management Systems from Princeton University.

TESTIMONY

Surface Transportation Board

January 15, 1999	Docket No. 42022 FMC Corporation and FMC Wyoming Corporation v. Union Pacific Railroad Company, Opening Verified Statement of Christopher D. Kent and Benton V. Fisher
March 31, 1999	Docket No. 42022 FMC Corporation and FMC Wyoming Corporation v. Union Pacific Railroad Company, Reply Verified Statement of Christopher D. Kent and Benton V. Fisher
April 30, 1999	Docket No. 42022 FMC Corporation and FMC Wyoming Corporation v. Union Pacific Railroad Company, Rebuttal Verified Statement of Christopher D. Kent and Benton V. Fisher
July 15, 1999	Docket No. 42038 Minnesota Power, Inc. v. Duluth, Missabe and Iron Range Railway Company, Opening Verified Statement of Christopher D Kent and Benton V Fisher
August 30, 1999	Docket No 42038 Minnesota Power, Inc. v. Duluth, Missabe and Iron Range Railway Company, Reply Verified Statement of Christopher D. Kent and Benton V. Fisher
September 28, 1999	Docket No. 42038 Minnesota Power, Inc v. Duluth, Missabe and Iron Range Railway Company, Rebuttal Verified Statement of Christopher D. Kent and Benton V. Fisher
June 15, 2000	Docket No. 42051 Wisconsin Power and Light Company v. Union Pacific Railroad Company, Opening Verified Statement of Christopher D. Kent and Benton V. Fisher
August 14, 2000	Docket No. 42051 Wisconsin Power and Light Company v. Union Pacific Railroad Company, Reply Verified Statement of Christopher D. Kent and Benton V. Fisher
September 28, 2000	Docket No. 42051 Wisconsin Power and Light Company v. Union Pacific Railroad Company, Rebuttal Verified Statement of Christopher D. Kent and Benton V. Fisher
December 14, 2000	Docket No. 42054 PPL Montana, LLC v. The Burlington Northern Santa Fe Railway Company, Opening Verified Statement of Christopher D. Kent and Benton V. Fisher
March 13, 2001	Docket No. 42054 PPL Montana, LLC v. The Burlington Northern Santa Fe Railway Company, Reply Verified Statement of Christopher D. Kent and Benton V. Fisher
May 7, 2001	Docket No. 42054 PPL Montana, LLC v. The Burlington Northern Santa Fe Railway Company, Rebuttal Verified Statement of Christopher D. Kent and Benton V. Fisher

October 15, 2001	Docket No. 42056 Texas Municipal Power Agency v. The Burlington Northern Santa Fe Railway Company, Opening Verified Statement of Benton V. Fisher
January 15, 2002	Docket No. 42056 Texas Municipal Power Agency v. The Burlington Northern Santa Fe Railway Company, Reply Verified Statement of Benton V. Fisher
February 25, 2002	Docket No. 42056 Texas Municipal Power Agency v. The Burlington Northern Santa Fe Railway Company, Rebuttal Verified Statement of Benton V. Fisher
May 24, 2002	Docket No 42069 Duke Energy Corporation v. Norfolk Southern Railway Company. Opening Evidence and Argument of Norfolk Southern Railway Company
June 10, 2002	Docket No. 42072 Carolina Power & Light Company v. Norfolk Southern Railway Company, Opening Evidence and Argument of Norfolk Southern Railway Company
July 19, 2002	Northern States Power Company Minnesota v. Union Pacific Railroad Company, Union Pacific's Opening Evidence
September 30, 2002	Docket No. 42069 Duke Energy Corporation v. Norfolk Southern Railway Company, Reply Evidence and Argument of Norfolk Southern Railway Company
October 4, 2002	Northern States Power Company Minnesota v. Union Pacific Railroad Company, Union Pacific's Reply Evidence
October 11, 2002	Docket No. 42072 Carolina Power & Light Company v. Norfolk Southern Railway Company, Reply Evidence and Argument of Norfolk Southern Railway Company
November 1, 2002	Northern States Power Company Minnesota v. Union Pacific Railroad Company, Union Pacific's Rebuttal Evidence
November 19, 2002	Docket No. 42069 Duke Energy Corporation v. Norfolk Southern Railway Company, Rebuttal Evidence and Argument of Norfolk Southern Railway Company
November 27, 2002	Docket No. 42072 Carolina Power & Light Company v. Norfolk Southern Railway Company, Rebuttal Evidence and Argument of Norfolk Southern Railway Company
January 10, 2003	Docket No. 42057 Public Service Company of Colorado D/B/A Xcel Energy v. The Burlington Northern and Santa Fe Railway Company, Opening Evidence and Argument of The Burlington Northern and Santa Fe Railway Company
February 7, 2003	Docket No. 42058 Arizona Electric Power Cooperative, Inc. v. The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad, Opening Evidence of The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad

April 4, 2003	Docket No. 42057 Public Service Company of Colorado D/B/A Xcel Energy v. The Burlington Northern and Santa Fe Railway Company, Reply Evidence and Argument of The Burlington Northern and Santa Fe Railway Company
May 19, 2003	Docket No. 42057 Public Service Company of Colorado D/B/A Xcel Energy v. The Burlington Northern and Santa Fe Railway Company, Rebuttal Evidence and Argument of The Burlington Northern and Santa Fe Railway Company
May 27, 2003	Docket No. 42058 Arizona Electric Power Cooperative, Inc. v. The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad, Joint Variable Cost Reply Evidence of The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad
May 27, 2003	Docket No. 42058 Arizona Electric Power Cooperative, Inc. v. The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad, Reply Evidence of The Burlington Northern and Santa Fe Railway Company
June 13, 2003	Docket No. 42071 Otter Tail Power Company v. The Burlington Northern and Santa Fe Railway Company, Opening Evidence of The Burlington Northern and Santa Fe Railway Company
July 3, 2003	Docket No. 42058 Arizona Electric Power Cooperative, Inc. v. The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad, Joint Variable Cost Rebuttal Evidence of The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad
October 8, 2003	Docket No. 42071 Otter Tail Power Company v. The Burlington Northern and Santa Fe Railway Company, Reply Evidence of The Burlington Northern and Santa Fe Railway Company
October 24, 2003	Docket No. 42069 Duke Energy Corporation v. Norfolk Southern Railway Company Supplemental Evidence of Norfolk Southern Railway Company
October 31, 2003	STB Docket No. 42069 Duke Energy Corporation v. Norfolk Southern Railway Company, Reply of Norfolk Southern Railway Company to Duke Energy Company's Supplemental Evidence
November 24, 2003	STB Docket No. 42072 Carolina Power & Light Company v. Norfolk Southern Railway Company. Supplemental Evidence of Norfolk Southern Railway Company
December 2, 2003	STB Docket No. 42072 Carolina Power & Light Company v. Norfolk Southern Railway Company, Reply of Norfolk Southern Railway Company to Carolina Power & Light Company's Supplemental Evidence
January 26, 2004	STB Docket No. 42058 Arizona Electric Power Cooperative, Inc. v. The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad Company, Joint Supplemental Reply Evidence and Argument of The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad Company

March 1, 2004	STB Docket No. 41191 (Sub-No. 1) AEP Texas North Company v The Burlington Northern and Santa Fe Railway Company, Opening Evidence and Argument of The Burlington Northern and Santa Fe Railway Company
March 22, 2004	STB Docket No. 42071 Otter Tail Power Company v. The Burlington Northern and Santa Fe Railway Company, Supplemental Reply Evidence of The Burlington Northern and Santa Fe Railway Company
April 29, 2004	STB Docket No. 42071 Otter Tail Power Company v. The Burlington Northern and Santa Fe Railway Company, Rebuttal Evidence of The Burlington Northern and Santa Fe Railway Company
May 24, 2004	STB Docket No. 41191 (Sub-No. 1) AEP Texas North Company v. The Burlington Northern and Santa Fe Railway Company, Reply Evidence of The Burlington Northern and Santa Fe Railway Company
March 1, 2005	Docket No. 42071 Otter Tail Power Company v. BNSF Railway Company, Supplemental Evidence of BNSF Railway Company
April 4, 2005	Docket No 42071 Otter Tail Power Company v BNSF Railway Company, Reply of BNSF Railway Company to Supplemental Evidence
April 19, 2005	Docket No. 42088 Western Fuels Association, Inc. and Basin Electric Power Cooperative, Inc. v. BNSF Railway Company, Opening Evidence of BNSF Railway Company
July 20, 2005	Docket No. 42088 Western Fuels Association, Inc. and Basin Electric Power Cooperative, Inc. v BNSF Railway Company, Reply Evidence of BNSF Railway Company
July 27, 2004	STB Docket No. 41191 (Sub-No. 1) AEP Texas North Company v. The Burlington Northern and Santa Fe Railway Company, Rebuttal Evidence of The Burlington Northern and Santa Fe Railway Company
September 30, 2005	Docket No. 42088 Western Fuels Association, Inc. and Basin Electric Power Cooperative, Inc. v. BNSF Railway Company, Rebuttal Evidence of BNSF Railway Company
October 20, 2005	Docket No. 42088 Western Fuels Association, Inc. and Basin Electric Power Cooperative, Inc. v. BNSF Railway Company. Surrebuttal Evidence of BNSF Railway Company
June 15, 2006	Docket No. 42088 Western Fuels Association, Inc. and Basin Electric Power Cooperative, Inc. v. BNSF Railway Company, Reply Supplemental Evidence of BNSF Railway Company
June 15. 2006	Docket No. 41191 (Sub-No. 1) AEP Texas North Company v. BNSF Railway Company, Reply Supplemental Evidence of BNSF Railway Company
March 19, 2007	Docket No. 41191 (Sub-No. 1) AEP Texas North Company v. BNSF Railway Company, Reply Third Supplemental Evidence of BNSF Railway Company

March 26, 2007	Docket No. 42088 Western Fuels Association, Inc. and Basin Electric Power Cooperative, Inc. v. BNSF Railway Company, Reply Second Supplemental Evidence of BNSF Railway Company
July 30, 2007	Docket No. 42095 Kansas City Power & Light v. Union Pacific Railroad Company, Union Pacific's Opening Evidence
August 20, 2007	Docket No. 42095 Kansas City Power & Light v. Union Pacific Railroad Company, Union Pacific's Reply Evidence
February 4, 2008	Docket No. 42099 E.I. DuPont De Nemours and Company v CSX Transportation, Inc., Opening Evidence of CSXT
February 4, 2008	Docket No. 42100 E.I. DuPont De Nemours and Company v. CSX Transportation, Inc., Opening Evidence of CSXT
February 4, 2008	Docket No. 42101 E.I. DuPont De Nemours and Company v. CSX Transportation, Inc., Opening Evidence of CSXT
March 5, 2008	Docket No. 42099 E.I. DuPont De Nemours and Company v. CSX Transportation, Inc., Reply Evidence of CSXT
March 5, 2008	Docket No. 42100 E I. DuPont De Nemours and Company v. CSX Transportation, Inc., Reply Evidence of CSXT
March 5, 2008	Docket No. 42101 E.I DuPont De Nemours and Company v. CSX Transportation, Inc., Reply Evidence of CSXT
April 4, 2008	Docket No. 42099 E.I. DuPont De Nemours and Company v. CSX Transportation, Inc., Rebuttal Evidence of CSXT
April 4, 2008	Docket No. 42100 E.I. DuPont De Nemours and Company v. CSX Transportation, Inc., Rebuttal Evidence of CSXT
April 4, 2008	Docket No. 42101 E.I. DuPont De Nemours and Company v. CSX Transportation, Inc., Rebuttal Evidence of CSXT
July 14, 2008	Docket No. 42088 Western Fuels Association, Inc. and Basin Electric Power Cooperative, Inc. v. BNSF Railway Company, Third Supplemental Reply Evidence of BNSF Railway Company
August 8, 2008	Docket No. 41191 (Sub-No. 1) AEP Texas North Company v. BNSF Railway Company, Fourth Supplemental Evidence of BNSF Railway Company
September 5, 2008	Docket No. 41191 (Sub-No. 1) AEP Texas North Company v. BNSF Railway Company, Fourth Supplemental Reply Evidence of BNSF Railway Company
October 17, 2008	Docket No. 42110 Seminole Electric Cooperative, Inc. v. CSX Transportation, Inc., CSX Transportation, Inc.'s Reply to Petition for Injunctive Relief, Verified Statement of Benton V. Fisher
August 24, 2009	Docket No. 42114 US Magnesium, L.L.C. v. Union Pacific Railroad Company, Opening Evidence of Union Pacific Railroad Company

September 22. 2009	Docket No. 42114 US Magnesium, L.L.C. v Union Pacific Railroad Company, Reply Evidence of Union Pacific Railroad Company
October 22, 2009	Docket No. 42114 US Magnesium, L.L.C. v. Union Pacific Railroad Company, Rebuttal Evidence of Union Pacific Railroad Company
January 19, 2010	Docket No. 42110 Seminole Electric Cooperative, Inc. v. CSX Transportation, Inc., Reply Evidence of CSX Transportation, Inc.
May 7, 2010	Docket No. 42113 Arizona Electric Power Cooperative, Inc. v. BNSF Railway Company and Union Pacific Railroad Company, Joint Reply Evidence of BNSF Railway Company and Union Pacific Railroad Company
October 1, 2010	Docket No. 42121 Total Petrochemicals USA, Inc. v. CSX Transportation, Inc , Motion for Expedited Determination of Jurisdiction Over Challenged Rates, Verified Statement of Benton V. Fisher

U.S. District Court for the Eastern District of North Carolina

March 17, 2006	Civil Action No. 4:05-CV-55-D, PCS Phosphate Company v. Norfolk Southern Corporation and Norfolk Southern Railway Company, Report by Benton V. Fisher

U.S. District Court for the Eastern District of California

January 18, 2010	E.D. Cal. Case No. 08-CV-1086-AWI, BNSF Railway Company v. San Joaquin Valley Railroad Co., et al.

Arbitrations and Mediations

July 10, 2009	JAMS Ref. # 1220039135; In the Matter of the Arbitration Between Pacer International, Inc., d/b/a/ Pacer Stacktrain (f/k/a/ APL Land Transport Services, Inc), American President Lines, Ltd. And APL Co Pte. Ltd. And Union Pacific Railroad Company; Rebuttal Expert Report of Benton V. Fisher

Exhibit 3

REDACTED

Exhibit 4

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